The Builder.

SATURDAY, APRIL 22, 1854.

DR. BRAUN, the learned secretary of the Archæological Institute of Rome, has again given a short course of lectures in English and German to the visitors of the Eternal City, and our readers may like to hear something about them. On this occasion the English lectures were limited to three, which were divided as follows:—1st. The Roman Forum; 2nd. The Fora of the Emperors; 3rd. The Colosseum. Each lecture was illustrated by plans, diagrams, or models. Respecting the Roman Forum, Dr. Braun observed that its boundaries, long a subject of dispute, have at length been determined by the discovery of the Sacra Via in 1834. It occupies a space at the foot of the Capitol, corresponding exactly to that of Piazza Colonna, and about 200 paces in length. The rostrum or tribune, whence the Roman orators harangued the people, formed the central point. Immediately behind are the remains of the Temple of Concord, at the back of which was the senaculum, or senate-house, where that body held its permanent sittings, and where Cicero delivered his orations against Catiline. Close to the rostrum we find the basement of a column, supposed to be the Umbilica Romæ, the centre of the city and of the world: a corresponding one is the Milliarium Aureum, or general milestone, mentioned by ancient writers as being at the foot of the Temple of Saturn, which we find in this very place still presiding over the Forum from its lofty terrace. In this edifice, Publicola, the colleague of the first consul Brutus, placed the public treasure. Here, too, was the seat of the quæstorship; and on the occasion of the triumphal processions, as soon as the train arrived at this spot, it was stopped, and the triumphator was compelled to declare upon oath that he had exactly stated the number of captives and treasure taken from the enemy. At the same moment the fatal sign was given to strangle those confined in the Mamertine prison, near the Temple of Concord.

This prison is older than Rome itself, and is constructed in the mode observed in the most ancient buildings of Italy and Greece; the layers of stone, forming the vault, being placed laterally, and projecting one over the other till they gradually meet. It was called Tullianum, from its having contained from time immemorial a spring of water. The well now connected with sacred legends existed already in the time of Jugurtha, who at the moment of his execution complained of the cold bath bestowed upon him by the Romans. The Tabularium, or public record office, situated on the slope of the Capitoline Hill, is the most remarkable and conspicuous building in the neighbourhood of the Forum. The solid masses of masonry it presents from that side convey an idea of the vast scale of Etruscan constructions. It was dedicated to Vespasian, who restored it, as well as the Capitol, and collected in the Tabularium about 3,000 documents written on brass tables. Seventy styli were discovered in clearing out the staircase leading from this building down to the Forum, which are now preserved in the Capitoline Museum.

The Basilica Julia, so called from its founder Julius Cæsar, was discovered a few years ago. It forms the boundary of the Forum on the side next the river, and was the most frequented court of law in Rome, called the centumoiral bar. Quintilian states that four tribunals sat here at once. Pliny was employed in this basilica as a barrister, and describes his arriving in court before his turn came, whilst a great trial was going on at which ladies were present in the higher galleries.

In the second lecture Dr. Braun gave an account of that system of buildings constituting what are termed the Forums of the Emperors, and which were successively called into existence by the daily increasing wants of public business, the Roman Forum no longer affording sufficient space. Julius Cæsar laid out a forum in the neighbourhood, with a temple dedicated to Venus Genitrix, the founder of his family. Some inconsiderable remains are still existing in a courtyard in the Vicolo del Ghettarello. Augustus finding this still inadequate to meet the increasing demand, laid out another, with a temple in the centre dedicated to Mars the Avenger. Some beautiful columns and a portion of the walls of the cella are to be seen at the Arco dei Pantani in Via Bonella. This archway is pierced through the ancient wall of the Forum. The temple must have been of great beauty. It was adorned with porticos, and statues of the most famous generals of antiquity were erected near. The Salian Brotherhood, one of the oldest institutions of Rome, held its sittings here. The Emperor Claudius appeared uninvited at one of their banquets, attracted by the odour of the viands.

Vespasian founded another forum, called also the Temple of Peace, and Domitian a fourth, which was afterwards completed and consecrated to Minerva. The beautiful ruins of the portico called the Colonnaccia are still to be seen. On the frieze appears the goddess herself as patroness of female occupations: she is surrounded by young girls, whom she instructs in the arts of weaving, spinning, &c.

All these forums were, however, far surpassed by that of Trajan. The centre was occupied by a splendid basilica, and the space in front was widened out by semicircular buildings, one of which is still existing at the foot of the Quirinal, bearing the name of the Baths of Paula Æmilias. We learn from coins that this basilica was richly adorned with sculptures. The roof was supported upon bronze beams, resting upon granite columns, and the outer walls were decorated with pillars of fine yellow marble. In the centre of the square stood an equestrian statue of the emperor, which so excited the admiration of the Persian prince Paramisdas that he expressed the desire to possess such a horse, when he was admonished by one of his courtiers first to procure himself such a stable.

In the third lecture, on the Colosseum, Dr. Braun observed upon the difference in the construction of Greek and Roman amphitheatres. In the former, the seats are supported by the sloping declivity of a hill. In the latter this mode of arrangement would scarcely have been admissible, even had the locality favoured it: as a necessary condition in the Roman amphitheatres was an exterior wall, pierced in every direction, to facilitate the entrance and exit of so many thousand spectators without confusion. This want suggested to the practical sense of the Roman architects, the beautiful system of open galleries, so conspicuous in the theatre of Marcellus. To the Roman people games were, next to bread, the greatest necessity of life, and this produced an architectural structure combining the advantages of a theatre with those of a circus, for the purpose of assembling an enormous crowd immediately round those blood-stained stages which Cicero calls the schools of death. Augustus is said to have conceived the design of constructing an amphitheatre of solid workmanship in the centre of the city, but it was reserved for the enterprising spirit of Vespasian to carry into execution so gigantic an idea. He selected as the site, the lake, around which were arranged the fanciful creations called the Golden House of Nero, as is precisely stated by Martial. The elliptical form was chosen as affording the greatest possible space for the accommodation of spectators. The few elements of which this great edifice is composed, undergo by the reaction of this peculiar shape an amazing variety of changes. There are, in fact, not two pillars of the same geometrical form, all being subject to the same law of centrifugal metamorphosis, varying gradually from the square to the diagonal direction of the rhomboid. The construction thus becomes so complicated, that it requires perpetual scientific survey.

We discover in the Colosseum three principal elements, each requiring separate analysis. 1st. The arena, or stage, where the games were performed. 2ndly. The different terraces of seats. 3rdly. The systems of staircases and corridors on which these seats rested, and by means of which they became accessible. The whole machinery, connected with the arena, for the introduction and removal of the gladiators and wild beasts, was subterranean, thus enabling thousands of attendants to be continually at hand, without impeding the progress of the games. The animals were raised up in wooden cages, which opened spontaneously, and then sank again into the earth. On other occasions, the whole arena was converted into a lake, the water being supplied by the reservoir connected with the baths of Titus, or by the Neronian aqueduct, some arches of which are still remaining between the Cælian and Palatine hills. To raise the tiers of seats to the height required, a double row of buttresses was constructed, which supported their immense weight. The seats, or gradinate, were all of white marble. The lower terrace was allotted to the emperor and persons of high rank, among whom the vestal virgins seem to have had a place. Each girdle was surrounded by a high wall, in which the doors, leading from the staircases, were let in. The whole was crowned by a lofty portico of woodwork. The wall behind the loggia of the emperor was said to be decorated by a mosaic ground, resplendent with gold. The openings giving entrance to the seats, were called Vomitoria, from their pouring out, as it were, the masses of spectators. Their number was considerable, in order to facilitate the dispersion of so great a crowd as assembled to view the games.

The outside walls are the support of the weight of the whole edifice, since all the inner terraces fall back upon them. To give stability to the structure, each successive girdle of arcades inclines somewhat inwards, producing a line sloping from the perpendicular, which gives to the whole a greater degree of firmness and solidity. When we consider the enormous bulk of the Colosseum, the time employed for the building appears incredibly short. It was finished in a period of little more than ten years.

The Colosseum was much injured by earthquakes; but in 1471 began the first serious devastation—Paul II. setting the example to succeeding ages in the work of destruction. The Palazzo di Venezia was built with the blocks of travertine plundered from it; and, henceforward it was looked upon as a stone quarry, palaces and churches being remorselessly constructed from its venerable ruins. Even as late as 1705 stones were taken thence to build a harbour.

After the lecture, access was given to all who had been present to see the model made by Dr. Braun for the Crystal Palace. It is executed in a material resembling ivory in whiteness and polish. All the measurements are of the utmost exactness, on the scale of 1 to 100, all the details being wrought with the hand, and not moulded. This model represents the Colosseum as restored; and, even on this scale, conveys an astonishing idea of the magnificence of that unrivalled structure.

For greater convenience in the examination of its component parts, it is divided into four;

so that the internal structure is more readily understood. Each of these four portions consists of nearly 10,000 separate pieces, in which whole systems of stairs are reckoned only as one. Of the 360 open arches forming the circuit of the Colosseum, 180 are filled with statues, the proportions of which are founded on the broken fragments still lying there. The portico above is furnished with metal poles for fixing the velarium, or awning, which covered in the whole Colosseum during the games, so as to shelter the spectators from sun and rain.

We understand that a model of the Pantheon is in progress. Dr. Braun's work on "The Ruins and Museums of Rome" is already published. The English translation will appear in the course of a few months.

A LITTLE TALK.

OUR readers have doubtless heard with satisfaction that Burlington House, in Piccadilly, will be secured to the nation. The Chief Commissioner of Woods and Forests has become the purchaser, at the sum, as we understand, of 140,000*l.* Some say that it has been bought for the purposes of a national gallery, and others as a meeting-place for the learned societies, but its appropriation is as yet doubtful. The misfortune is, that however good the purpose may be, government officials and commissioners always move so slowly that the present generation are not quite certain of benefiting by the acquisition.

What has become of the land at Kensington purchased by the Royal Commissioners of '51? And where have gone the noble intentions with which it was bought? One of these days, when the continuation of Farringdon-street has been opened, the Nelson monument finished, smoke abolished, London drained, and the Thames embanked, we shall hear that the appropriation of the land at Kensington is about to be considered. As Eliot Warburton observes,—"Comfort is always on the road, though ofttimes it travels wearily and slow,"—especially if it start from a Government office. We observe, by the way, that at the entrance to the Commissioners' land next the Fulham-road, the "Oratorians," who purchased the plot of ground adjoining Brompton Church, have given up a portion of it in front (for a consideration,—some say 2,000*l.*) to improve the approaches. The enclosure wall is being erected behind the fence, and serves to show what a noble road we shall have here. The Bell and Horns public-house ought nevertheless to be removed: it stands greatly in the way, and renders the turn of the Fulham-road there always dangerous. The enclosures in front of Brompton-row, reaching from Brompton-square to Knightsbridge, should be improved. They offer facilities for rendering the road beautiful. Returning for an instant to the Oratorians, the buildings erected for them, including a very large residence * and a temporary chapel 181 ft. long, 40 ft. wide, and 27 ft. to the ridge of the roof, are certainly at present no ornament to the neighbourhood: indeed, "not to put too fine a point on it"—quite the reverse. Doubtless, however, the skill of Mr. Scoles will ultimately evoke something like order and beauty out of the at present odd-looking conglomeration.

Beauty! how we all love and reverence it when it is *made evident to us!* What a large debt we owe to its producers! "It is a righteous instinct which bids us welcome and honour beauty, wherever it may be found, as something of real worth—divine, heavenly, ay, though we know not how, in a most deep sense eterna!."†

Are architects producers of beauty? They ought to be so, and if so should be honoured. The extent to which they are "honoured" in *Ireland* has just been shown in a very curious way, if we may believe our advancing contemporary, *The Civil Service Gazette;* and we have no reason to doubt it. Mr. Thomas M. Irvine, the son of a respectable citizen of Dublin, was lately nominated by the Treasury to a lieutenancy in the Revenue Police Force. He received a notice of the qualifications necessary for him to establish before his appointment could be confirmed. Several high accomplishments, such as being acquainted with the four first rules of arithmetic, were duly set forth in this list, and he was required to produce certificates from at least two gentlemen of well-known respectability that his position in society was that of a gentleman, that he had not been in any employment derogatory to a gentleman, and that his character was exemplary, before Colonel Maclachlan, Chief Inspector of Revenue Police, Dublin. He flattered himself that his qualifications were completely substantiated, but Col. Maclachlan found by the young man's papers that he had been apprenticed to an architect for three years, and had served his apprenticeship with credit and ability; and for this sole and truly singular reason, that Mr. Irvine was an architect by profession, the Chief Inspector of Revenue Police decided that he was not a gentleman worthy to become a lieutenant in his distinguished corps!"

If the case be correctly stated, well may the *Advocate* wonder how "Colonel Maclachlan, or any other individual, arrived at the years popularly supposed to accompany common sense and discretion, could have bogged himself in so ignorant, foolish, but, at the same time, unpardonable a mistake." We should like to hear this revenue policeman's definition of a gentleman. The Institute of Irish Architects ought to inquire into the correctness of the statement.

A propos of works striving after the beautiful, we may mention that Mr. Bell's selected model for the Wellington Memorial, to be erected by the Corporation of London in Guildhall, represents the Duke between Peace and War, a male and female figure. The pedestal is inscribed "Duty," supported by "Wisdom" and "Honour," and on the subplinth is a bas-relief of the Field of Waterloo, intended to be of considerable size, and containing portraits of Wellington, Napoleon, Ney, Anglesea, Hardinge, and others. The composition is distinguished by a noble simplicity, and promises a fine work.

Some beautiful marbles and bronzes were sold in Paris the other day, in M. Visconti's Collection of Works of Art, comprising, too, enamels, pictures, and books. The pottery fetched large prices. For example, a dish by Bernard Palissy, 50*l.*; an ewer, by Jean Courtois, 120*l.*; two dishes, by Pierre Courtois, 123*l.*; and an oval dish, by Jean Limosin, 187*l.* The sale realised in the whole, 3,360*l.*

Speaking of sales, a friend in the State Paper-office, directs our attention to the circumstance that "Old Ranelagh House, near Chelsea College, one of the last remnants of the last century, is to be sold by Mr. George Haynes, on the 24th, for building materials, and demolished." Ranelagh House was built at the end of the seventeenth century, by Jones, Viscount Ranelagh. The well-known place of entertainment bearing the same name, so much frequented at one time, that as Walpole writes, "Going there t'other night, in a string of coaches, we had a stop of six-and-thirty minutes,' was formed on the site of the gardens of this villa, about 1742. The "Handbook for London" says the house was standing when Lysons published his "Environs," but has since been taken down. If our informant be correct, however, some portions of it still remain. The clearance is to be made to form the new road from Sloane-street to the Suspension-bridge and Battersea-park.

MILITARY CAMP, OR TRAINING GROUND.—The authorities at the War-office, having obtained a grant from Parliament of 100,000*l.* for land for occupation by the army, have bought about 4,000 acres of land at Aldershot, Farnham, and Ash, in Hampshire and Surrey, about 35 miles from London. The land, according to the *Daily News*, is admirably adapted for the purpose. The nearest railway stations from London will be the South-Eastern and the South-Western, both at Ash, and within a mile of the ground. It is intended to encamp the militia on it shortly. Parties are already building and speculating on the improved value of the land in the locality.

* Some idea of the scale on which the building is executed may be gathered from the following dimensions:—The Oratory, 72 feet long, 30 wide, 29 high; the library, 72 long, 30 wide, 23 high; the refectory, 50 long, 30 wide, 28 high; the corridors of the house, 16 long, 9 wide, 14 high.

† Kingsley.

NOTES ON THE HISTORY AND CONDITION OF THE BUILDING TRADES.

PLASTERERS.*

THE trade of plasterer, as we know it, took its rise with the introduction of plaster of Paris, and of the method of casting plaster ornaments from moulds of wax. It is capable of being distinguished into two leading divisions—interior work and exterior work. To each of these divisions we shall now direct the reader's attention.

The first thing a plasterer does on entering a building is to nail the laths to the joists and quarters.† When he has thus obtained the groundwork for his plaster ceilings and walls he proceeds to lay on the first coat. On a surface of lath this is termed "pricking up:" on a brick surface it is called "rendering." The second coat is called "floating," from the operation being conducted by means of long wooden straight edges. The third coat is the "finishing or setting." For stucco work this last coat consists of chalk-lime and sand in the proportions of two of sand and one of lime; and it is wrought to an even surface with the float, then finished with the trowel. The lime used for this purpose is chiefly derived from the limestone formation of Purfleet in Essex, and is to be distinguished from the strong Dorking or stone lime used for the mortar of the bricklayer. It is likewise not to be confused with the plaster of Paris used for finishing the ceilings and the cornices. All the running mouldings of cornices are composed partly of lime and partly of plaster in the proportion, generally speaking, of two to one. But all the enrichments and cast ornaments are composed of pure plaster alone.

Respecting the distinction between lime and plaster much popular misapprehension exists. What is commonly called lime consists of a combination of the oxide of calcium with carbonic acid (CaO, CO_2) or carbonate of lime; what is called plaster consists of a combination of the same oxide with *sulphuric acid* (CaO, HSO_4) or sulphate of lime. A more popular distinction would be that of *chalk* and *gypsum*.

The sulphate of lime is known under the commercial name of gypsum. It is to be found widely distributed over the tertiary formations of England, France, in the Alps, and the lower Pyrenees. The stone which yields the best plaster without exception is that derived from the great Paris basin. The gypsum from the best quarries is nearly as hard as the indurated limestones; and when heated until its water of crystallization is driven off, it becomes pulverulent like flour. In this state, if fresh water be presented to it, it recombines with a normal quantity and reassumes the form of a hydrate. It is this property which has led to its use in buildings. When the plaster is burnt it becomes anhydrous, and when worked up again the precise quantity of water it had lost is restored to it. The degree of hardness in the plaster generally depends upon that of the stone, for it is well known that the hardest stones produce the hardest plasters. In England, where plaster is expensive, its use we have seen is restricted to the finer parts of the decoration—the cornices, mouldings, and cast ornaments; but in France it is largely used for rendering walls, both internally and externally. It is, however, unlike the Roman cement or the hydraulic limes, utterly incapable of resisting the action of water. Roman cement was discovered in the year 1796, by Mr. Parker, of London, who obtained a patent for manufacturing it from the septaria nodules of the London clay formation found in the Isle of Sheppy. His process consisted in calcining the stone, previously broken into small pieces, to a point equal to the commencement of vitrification and then reducing it to powder by some mechanical means. Subsequently, Mr. Frost discovered that a cement of the same nature could be produced from the septaria of Harwich, on the coast of Essex. Mr. Atkinson introduced another from the nodules of the argillaceous limestones of the secondary formation of Yorkshire. The whole strength and value of these cements consist in the proportion of clay which they contain in combination with the carbonate of lime. And it is this

* See p. 125, *ante.*

† In the north of England and in Scotland this constitutes a separate branch of the trade. See for some notes on the Edinburgh lathsplitters, *Builder*, vol. XI.

which also gives them the property of resisting the action of water.

Plaster of Paris is commonly used in two ways,—one in its natural state, and the other in a peculiar chemical condition, wherein, being deprived of its water of crystallisation, it becomes harder and more indurated, and is then known under the form of Parian cement, and under various other denominations.

There are two species of stuccoes, those made from lime and those made from plaster. When mixed with different metallic oxides they constitute the celebrated stucco work of the Roman and Italian architects. But it will be seen from its limited use in this country (it being almost exclusively confined to Scagliola and artificial marble decorations), how little right we have to apply the term *stucco* to any of our modes of plastering in lime or in gypsum.*

We shall now give the reader a concise account of the manner in which the exterior plastering is conducted; which means, in other words, the manner in which our London fronts are compoed.

Compo is the contraction, or rather the cant name, for the mixture with sand and Roman cement, Portland cement, Bailey's cement, John's cement, Brown's cement, Robinson's cement,—all of which are used to plaster the fronts of houses. Of the composition we had better say nothing. This compo is rather an omnivorous substance with London builders. It may be used for anything, anywhere. To plaster outside walls and inside walls, to plaster dry walls or damp walls, for running cornices, for casting ornaments of every description.

We shall suppose our plasterer has a front to compo in a fashionable street. It is very probably in the Italian style. It has a large projecting cornice, circular pediments to the windows, and rockwork projections all over the corners. This is quite a simple job; but we are fond of simple illustrations, and we need not become too mysterious. In plastering the cement over the front there is no great difficulty. Grounds or narrow stripes of cement are formed in the usual manner, and the wall is floated and finished. It is then carefully scored with a little iron instrument into the irregular rectangles which are supposed to imitate stonework. But with respect to the cornices, there is a little science to be practised. The cornice of the entablature projects 18 inches; but ordinary brickwork alone cannot be made to project 18 inches; therefore pieces of York stone are necessary to be built into the wall as a support for this brickwork, which underlays this cornice. Upon this groundwork a cornice of cement is run with a mould. Such is the method of constructing the cornice of the entablature. But some of our readers will smile when we come to the pediments of the windows. In this case there is very frequently no projecting bricks, no projecting York stone. How, then, is the compo to be held—how can it be made to stick? Here is one way. Over the lintel of the window are stuck into the fronts of the brick a number of iron spikes, forming the outline of the pediment. Round these spikes is then interlaced a quantity of tarred rope-yarn, and the cement is plastered upon this singular projection, and so the circular pediment in the Italian style is finished.

We shall now throw together a few notes upon the present condition of plasterers.

We may remark before proceeding further, that the plasterers some years ago—we are far from asserting that such is the case now—were distinguished among all contemporary tradesmen for their dissipated habits. They were, perhaps, the least to be depended upon in any emergency, or in the height of a busy season; and as a corresponding result, they were uniformly the first to cry aloud when the busy season was past, and the short time came round.

Although this body of men have recently made strides in the march of improvement, it may be worth while to look for a moment at the causes which, in the opinion of the writer, chiefly led to their dissipation, and to their irregularity of conduct.

During the last century the journeyman builder was in practice an adept at the different branches of his business, which a knowledge of the division of labour has since led men to separate. Thus, the journeyman carpenter, who is still the most ubiquitous tradesman connected with building, was likewise a journeyman plasterer, and not unfrequently a journeyman plumber and glazier. It is, we believe, not uncommon in country towns in the present day to find some grey-haired mechanic who, to the astonishment of his youthful hearers, can boast of his great acquirements in every department of trade in connection with building. He can, in all probability, point to a house over the way which he and his mate finished between them; and finished in such a manner as may well bear comparison with the gingerbread style of construction, now, alas! so common in all great cities and townships of the kingdom. If he speaks to a modern carpenter, the latter will, no doubt, perceive defects in the panellings, which he could have improved; if to a plumber, the plumber will also detect the coarse finish in the overcasting of his joints; and if to a plasterer, the plasterer will put his eye on a level with the wall line, and detect a three-cornered protuberance in the centre of the plaster. But neither of these artizans, with all his skill in his respective department, could do what the old man and his mate did between them when they were young: that is, build a house.

Whether the division of labour into these separate branches—which, if accompanied with unity of design, unquestionably has improved the style of construction, and increased the produce to a marvellous extent—be altogether an unmixed good as far as regards the working man, we have often had serious grounds for calling in question. We do not say that it is practicable or desirable even to rear men up who should be able to build entire houses, make their own beds, stuff their own chairs, solder their own teapots, build up their fire-grates, and forge their fire-irons. Such men we have no doubt may exist, just as we know that blacksmiths are upon this earth who preach universal peace, and who speak in ten different languages; and that there are literary men who profess to write with equal power and fluency upon the diversified subjects of science and art, literature and philosophy, logic and rhetoric, *et hoc genus omne!*

Indeed, when it follows, as it generally does, that the tradesman who is proficient in one branch of trade receives more wages than the tradesman who is only imperfectly acquainted with an infinite number of branches, the philosophy of the division of labour so far accords with the theory of human progress, that it comes a welcome guest to the minds of all who cherish that theory, and who desire its extension. But when, on the other hand, it follows that the division of labour has a tendency to reduce wages, and to produce irregularity in the distribution of that labour, we must on the same grounds adopt the opinion that the division of labour has overstepped its legitimate boundary; and that it has been the means of producing evil, because it has been carried too far.

These reasons at least seem to arise from the consideration of the social condition of the plasterer. When that artizan stood in connection with some other branch of the trade, he could always depend upon his full wages. But now, from reasons upon which we need not dilate, but which chiefly arise from his short time in the winter season, he cannot depend upon more than two-thirds of his full wages. We have here a few averages of plasterers' wages, selected by one of the most intelligent of their number as a fair example of what good artizans may be prepared to expect for their week's work, taking the average at one year, and the wages nominally at 30s. per week:—

No.	Period.	Rate.	Sum Received.	Average per week.
A.	56 weeks.	At 30s.	£73 3 9	£1 6 1¼
B.	56 ,,	,,	68 13 9	1 4 7
C.	52 ,,	,,	42 19 0	0 16 6¾
D.	52 ,,	,,	47 13 9	0 18 4
E.	52 ,,	,,	48 16 0	0 18 9¼

Now there are here to be found two important considerations, which this table gives us. In the first place, a skilled artizan, who receives nominally, and is supposed to be worth, 30s. per week, receives actually upon the average a sum as low as 17s. and 18s. per week (C, D, and E). In the second place, where an artizan works during the height of a busy season fifteen and twenty hours overtime per week (A and B), his wages do not exceed on the whole year's average, in the highest case, 26s. per week. It would be a singular question, had we time to spare, to ascertain the equation calculus wherewith to represent the probability involved in this case. But it is, we think, quite palpable. And the reasons are precisely as we have stated them. The plasterer is overburdened with work at one season, and at another he is thrown out of work altogether.

This, then, may be the cause of the irregularity and dissipation attributed to plasterers. If you wish to depend on a man's services, it is the worst policy imaginable to leave him in an unsettled position. He has no heart to work. He does everything with a grudge. He has no time to improve his present condition, for his thoughts are occupied with the future. What signifies the beauty of this cornice, or the undercutting of that ornament to him; when he knows by the time it is properly hardened and in its place that he will be starving over a miserable fire upon half-pay? And such a reasoning leads other men to do this besides plasterers. What but this made the literary men of last century—who one day blazed in gold lace, and another day dined on 2d. in a cellar—so reckless and so dissipated? Finally, what gives rise to the rabble and *prolétariat* of London, but a sense of the insecurity of their employment as costermongers, as huxters, as poor watercress women, all entirely frozen out? But we must hasten on. The plasterers have not been distinguished by any protracted strike. They were indeed mixed up with the document strike in 1823, along with the masons. And the only important movement since that period was made last year, in company with the carpenters and bricklayers, for an advance of wages, which they obtained. Previous to that the wages were 5s. per day; these are now 5s. 6d. per day; always, let it be understood, subject to the deduction arising from loss of work in bad weather, &c. The higher classes of tradesmen, however, receive more wages than this. Modellers, who work up the compo ornaments of fronts and staircases, and the plaster for ornamental ceilings and cornices, receive from two guineas to five guineas per week. Such men are frequently possessed of fine artistic tastes. Many of them are employed by sculptors: many of them rise to be sculptors themselves. We may state here, that there are between 5,000 and 6,000 plasterers in London.

There is a trades' union in a very flourishing condition connected with this business. The committee meet every Tuesday evening at the Adam and Eve, St. Pancras-road. The object of this union is both political and economical. For cases of accident and illness a subscription is made of sixpence a week: and for the purpose of defraying the current expenses of the society a further subscription is raised of twopence per week. Its principal object, however, is that of guarding against the introduction of "hawk-boys"* and bricklayers' labourers into the trade, which, in times when business is brisk, is a thing the plastering trade is particularly subject to. The fact is, there is no apprenticeship served to the trade. Men come seeking work: if in winter they will not get it, whatever their skill may be; in summer, they will be employed although they only know how to mix lime.

Plasterers are a very healthy set of men. We do not indeed know of a trade connected with building where the operatives, if sober and steady in their habits, are so likely to reach to the extreme limits of old age. It is well known among themselves that they have a great number of old men belonging to them; only, as we were dolorously informed in course of our inquiries, "Most of the old plasterers die in the work'us!" We cannot vouch for the truth of this statement; but we can at least account for the beneficial influences of their trade. In the

* See the treatise on "Lime and Cements," by Geo. R. Burnell, C.E. London: Weale.

* The square pallet the plasterers hold in their hand is termed a "hawk." Every journeyman has a boy or a labourer who attends to the mixing of the lime and to supplying the "hawk."

first place the muscular exercise is capital: neither too protracted nor too severe. We could scarcely invent a better game of gymnastics than the rendering of a wall. In the second place, the lime has a strong sanitive influence; it sometimes affects the eyes, but its action on the blood and on the bones is so singularly beneficial, that plasterers, even if ill fed and worse clothed, are often strong and healthy men.

A SCALE OF SQUARE ROOTS.

IN the progress of the formation of scales for obtaining the lines of the intersections of solids and the curves of numerous projections from them, I have constructed a scale of "square roots" which points to a host of similar character for proportioning varying divisions of finite, and, as far as practicable, comprehensively by infinite laws, varying divisions of infinite right lines.

Considering that these scales coincide with some and indicate how others of the right-lined proportions of the "Parthenon" may have been obtained, I have prepared the accompanying as examples; but this field is far too wide for any single individual fully to investigate it, and I have vastly more before me in reference to curves than, unaided, I can ever accomplish, or even indeed leave adequate traces of the numerous discoveries I have made of facts,—links of great importance to complete the chain of the septenary system, &c. It is now more than thirty years since I first invited attention to what I had then ascertained,—the great utility of which is made more manifest and extended by subsequent and recent advances.

Mr. Pennethorne, very ably, in apamphlet, in 1844, urges the necessity of public support for "fully restoring the long-lost scientific principles which guided the Grecian artists." With much of what Mr. Pennethorne has stated I concur; but I will only now advert to two points, respecting which, with more information, he would, I think, alter some of his opinions.

The first is, I would say, that it was *not* by "*elaborate calculations* of the Greek architects in the preparations of their design," that they produced and have left on record in marble so much truth and beauty.

The second is, that the varying curves they applied in art were *not* all formed by *combinations* of plane conic sections.

Mr. Hay says, that "I cannot help demurring to the conclusions at which Mr. Penrose has arrived." "The proof," he further says, "can only be so in the absence of a knowledge of the composite ellipse."

It is more than thirty years since I *composed* forms with the ellipse, but that practice I abandoned immediately after, when I had discovered that apparently similar forms could, with greater accuracy and facility, be described by simple continuous motion.

I say "apparently," but to the instructed eye and mind distinguishably different, and it is, I conceive, only in the "absence" of "a knowledge" of these beautiful laws, their true results, and their intimate relation to, but deviation from, the ellipse and the other plain conic sections, as well as other curved sections, that Mr. Hay, Mr. Pennethorne, and, indeed, Mr. Penrose, have fixed their minds so intently on curves with which they are familiar, as having been applied in ways, however near the approximation may be, for which they are clearly not so appropriate as others.

For example, a curve of *contrary flexure* cannot be composed of lines which have no point of infinite radius; and no such point can be found in any plain section of a cone.

Having made these remarks, I now invite attention to an example of a scale of square roots.

The law by which the divisions in fig. 1 are determined, it should be noticed, and will appear by the explanation, produces both commensurable and incommensurable lengths, and that all these are obtained without calculation, with greater ease and as correctly as they can be by any mathematical process, however far extended; and then sets off with the most accurate scale of equal divisions, adjusted with a micrometer.

Let O P and O 1 be the sides of a square; then 1 P, its diagonal, is, in respect to the side of the square, *in*commensurable.

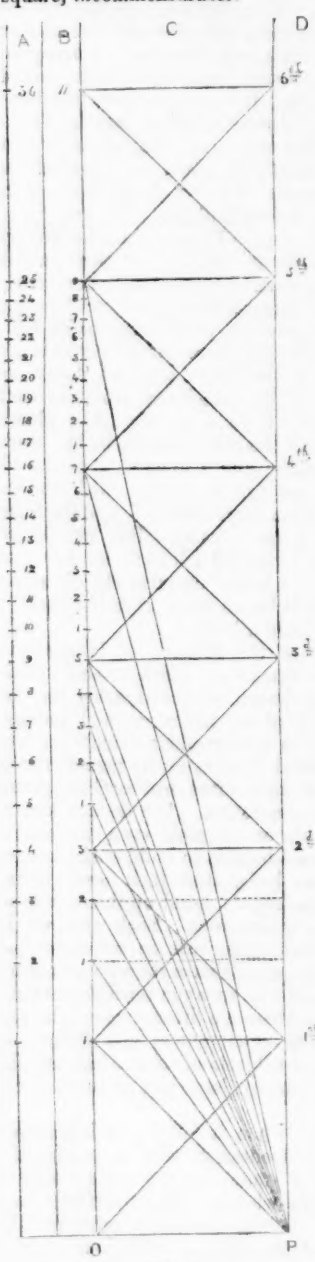


FIG. 1.

If the side of the square be 1, then the square of 1 or O 1 is 1; and $1^2 + 1^2 = 2$ = the square of the diagonal of the square 1 P.

This *first* diagonal 1 P, being set off from O to 2, gives the side for a parallelogram, which is the diagonal plane of a cube, of which the given square is a face.

The *second* diagonal 2 P, the diagonal of the diagonal plane of a cube, or the diagonal of a cube, is also incommensurable, both with the side of the given square, and also its diagonal, the first diagonal.

The diagonal of the cube, or 2 P, being set off from O to 3, gives the side for another parallelogram.

It will be thus seen that two divisions, 1 to 2 and 2 to 3 in this scale of proportions, are deduced from the cube; and these are to each other very closely, ·4142: ·3178, in the proportion of the bottom to the top diameter of the columns of the Parthenon, as measured by Mr. Penrose.*

Here these proportions might have terminated with the cube, had it not been perceived that this method of applying the diagonals as the sides of other parallelograms might be continued indefinitely.

Accordingly, when proceeding, it was soon found that the diagonal of the parallelogram in the proportion of the side of a face to the diagonal of a cube, is commensurable with the side of the square; and that this, or P 3, being set off from O to 4, gives the side of a parallelogram of a *double* square.

* From a scale of square roots, proportions for bottom and top diameters of other columns, and of metal as well as marble, may be selected.

It will be evident by the diagram that by this simple process the side of the second square has been divided into three varying spaces, and, as shown by the dotted lines, these divide that square into three differently-proportioned parallelograms, two sides of each being each equal to the side of the square, the sides and diagonals of each of these parallelograms giving other proportions.

Continue to make the diagonal of the double square, and of every additional parallelogram the side for another parallelogram; then will follow the side of the *third* square, which will be divided into *five* varying spaces; the side of the fourth square into *seven*, the side of the fifth square into *nine*, the side of the sixth square into *eleven*; each additional square in this way added to the length of the parallelogram, having in its side two more varying dimensions in the scale than the preceding square. This peculiarity distinguishes this scale from all others.

Thus, by the diagram, O P = 1.

Then O 1 represents the square root of 1,
" O 2 " " of 2,
" O 3 " " of 3,

and so on to the length O′ 36, which represents the square root of 36, O P being = 1.

This scale may be continued to any practical extent. This diagram is divided into four columns. Under A are a series of numbers, the square root of any of which is the length of the scale from O′ to that number. Under B the figures enumerate the division in each square. Under C is a series of squares, or the plan of a series of adjoining cubes, and the number and direction of the plane sections in which the diagonal planes would cut each. The column under D is simply the numbers enumerating the cubes joined together. It may be again remarked that all these divisions have been obtained *without calculation*, and that the right angle and the square can be formed from any definite line given without any mathematical process. * * * * * *

The first diagonal which is commensurable with the side of the square (3 P, fig. 1) is the same as the hypothenuse of "the triangle of ½," as named by Mr. Hay, which is indeed the half of an equilateral triangle, the "isometrical" angle.*

The diagonal of the square and each succeeding diagonal incommensurable with any preceding one will be followed in some steps of the scale by other diagonals, with which it is commensurable.

There may be many squares (sides of squares may be bisected) commensurable with each other. The sides of squares may be the diagonals or half diagonals of other squares, and any other of the diagonals may become the sides of new squares, so that the units of measure may have been many, even in the same building, at the same time producing perfect harmony in the arrangements.

JOSEPH JOPLING.

* I will leave it to others to calculate all the proportions derivable from this scale applicable to the largest and smallest variations in every part of a design.

DINNER ON BEHALF OF THE PROVIDENT INSTITUTION OF BUILDERS' FOREMEN AND CLERKS OF WORKS.

AT the London Tavern, on Wednesday evening last, a numerous party of the friends and patrons of this thriving and commendable institution met at dinner, and passed an exceedingly pleasant evening, the general harmony increased by some very good music, and the whole graced by the presence of a truly *pretty* large assemblage of ladies, who, shame to the tyrannical customs of the day, were left entirely in the background, as a mere ornament in the *tout ensemble*, instead of occupying the most choice positions at the dinner-table itself.

Mr. George Baker, the governor of the institution, presided, and made an earnest appeal to the master builders, architects, engineers, and merchants present, on behalf of the institution, remarking that it was all the more entitled to a helping hand that its members aimed at helping themselves, and rendering their institution self-supporting. He gave a rapid review of its history from very small beginnings some twelve years since till now that it has steadily pro-

gressed into an important and useful institution, belonging to a most intelligent and most useful class of men, whose interests he, and those around him, were anxious to promote. The interests, indeed, were reciprocal: in numerous engagements it was quite impossible to go on without able foremen or clerks of works, and the employers were just as much indebted to them as they were to their employers. It was not enough for master builders or architects to pay well those who used their healthful energies on their behalf; they ought to give every assistance to their foremen and clerks of works in carrying out such objects as they had in view in the establishment of an institution like this, for behoof of those unable any longer to help themselves. Under these circumstances, he felt it his duty and his inclination, as much as ever, though no longer himself in business, to make the strongest appeal possible to the philanthropy of those present; and he felt sure the result would show that they had not lost any of the interest they had taken in this Institution. The fact that it could not claim much general interest on the part of the public, made its claim on those connected with the building trades all the stronger.

Professor Cockerell also addressed the meeting, on his health being drunk, as representing the profession of architects. He had much pleasure, he said, in offering aid to those who were aiding themselves. The Christian law of love towards our neighbour ought to convert masters and men into one vast bond of society, in links of loving kindness one with another. If wealth and prosperity had their advantages, they had also their duties; and he felt assured that this institution merited their consideration and support. He hoped it would be sustained with wisdom, otherwise it must fall. The public were generous, but they were also jealous, and liked to see a fair balance-sheet. They could not but feel, however, that an institution of this kind was founded upon right reason and right feeling.

Mr. Imray, as representing the profession of civil engineers, next spoke, in a like spirit; and the meeting was afterwards addressed by Mr. Henry Lee, Mr. Francis, Mr. William Lee, M.P. Mr. William Freeman, and other gentlemen.

The very handsome sum of 331*l.* 3s. was subscribed on the spot, including many sums of 10*l.* 10s. and 5*l.* 5s. among which we caught such names as Baker, Lee, Myers, McLean, Cockerell, Francis, Freeman, Jackson, &c. &c.

From the report ending January last, it appears that the sum total of funds, including fees, interest, and subscriptions, then amounted to 1,453*l.* There are four pensioners, three of them widows, who receive from 4s. to 6s. a week.

THE "OLD CHURCH" AT BRIGHTON.

THE restoration of the church of St. Nicholas, at Brighton, mentioned some time since, is completed, and the church has been re-opened. At the time when various towns were raising memorials to the Duke of Wellington, the Vicar of Brighton brought forward the proposition, "That the restoration and enlargement of the parish church, wherein his Grace the Duke of Wellington, at an early period of his life, was wont to worship, would be an appropriate and enduring monument of our gratitude, and veneration for his memory." And upon this subscriptions to the amount of 4,948*l.* were raised, and the works have been completed. Plans sent in some time before by Mr. Carpenter were adopted: the contractor was Mr. Bushby, of Littlehampton, whose tender, 2,985*l.* was the lowest of seven. Additional works have brought up the amount to 5,216*l.* and others, to the extent of 285*l.* are desired. The work was commenced on the 3rd of June, 1853.

The extreme length of the interior of the church (the chancel being 28 feet) is 112 feet; its width, 53 feet. The walls of the tower are 4 feet thick, and of the rest of the edifice, 2 feet 6 inches. The height of the nave is 31 feet, clear to the pitch. The side aisles have distinct roofs, but so slightly broken that they are apparently a continuation of the sloping roof of the nave.

The materials used in the work are bricks and flint, with Caen stone for facing; Bolney sand-stone for the columns, half of which are new; Delabole slates for the roofing, with three courses of Horsham stone for the edges.

The east window, of three lights, has been filled with stained glass, illustrating passages in the life of Our Saviour having reference to the avocations of a fisherman. The subject of the centre light is the miraculous draught of fishes; on one side of which is Our Saviour bidding Peter and Andrew come and be fishers of men, and on the other Peter calling to Our Saviour to save him as he is sinking on the water.

The actual memorial has the form of an Eleanor Cross, and is the work of Mr. Philip. The shape is hexagonal; the height, from the base to the summit, 18 feet 6 inches; the circumference, between 15 feet and 16 feet. The pedestal commences with a moulded base, rising from a tesselated pavement. On the base of the pedestal rests a plinth, covered with diaper work, surmounted by another moulding, on the broad champher of which is an inscription, in old English characters, in brass, which may be translated

IN MEMORY
OF THE GREAT DUKE OF WELLINGTON,
THIS SACRED BUILDING,
IN WHICH IN HIS YOUTH HE WORSHIPPED GOD,
IS RESTORED.

From the pedestal, and above the moulding with this inscription, rise four stories, with open tracery work, crocketed pinnacles, and an alabaster figure of St. George, sheathing his sword over the dragon, which lies slain at his feet, symbolical of the career of the great chieftain to whose memory the work is raised.*

DURATION OF STONE CARVINGS.

IN 1662, the monument to the memory of the botanist Tradescant was erected in Lambeth Churchyard: it is an altar tomb, and at each corner is cut out a large tree with its branches seeming to support the slab on the top: at one end is a hydra picking at a bare skull, supposed to be designed as an emblem of envy: on the other end are the arms of the family, the father and son of [whom] which are described as having

"Lived till they had travell'd art and nature through,
Of what is rare in land, in sea, in air."

On one side are ruins, Grecian pillars and capitals, an obelisk and pyramid, denoting the extent of their travels; on the opposite side a crocodile and various shells, expressive of their attention to the study of natural history.

In about a century time had nearly destroyed the carvings, which were restored in 1773, at the expense of the parish. In 1852, it was again necessary to re-carve the whole, which was again done at the expense of the parish. Sir Hans Sloane's monument, though of marble, is now, after less than a century, much destroyed, the inscription almost obliterated, and the foliage a jumble of knobs. Time has also so dealt with Westminster and Blackfriars bridges. How long may the carvings of the Houses of Parliament endure? Can precaution be taken to preserve them? would not linseed-oil be a fit application? Man forbid painting! although some of the carvings inside have been painted and also gilded, and the great palace of Buckingham has secured a great legacy to the painters.

T.

COMPETITION PREMIUMS.

THE excessive paltriness of the sums now frequently offered by committees for the best design sent in to them, even if it does not accuse them of stinginess and illiberality, throws some degree of discredit upon the profession itself. Those belonging to it must surely be in an exceedingly necessitous condition if they can be tempted to prepare designs for the mere *chance* of obtaining what, if they were certain of getting, would be a very miserable pittance.

By an advertisement in the *Builder* of late date, I see 10*l.* offered for a design together with specification and estimate included! Unless then there be some typographical error in the figures, architecture is, as a profession, made to cut a very sorry figure indeed. For that similar offers are responded to cannot be doubted, because else they would not continue to be made. There is besides a very shabby artifice now sometimes resorted to by committees, namely, that of nominally offering two premiums when they intend to bestow only one, the first and larger being deducted from "commission." To such pass, in fact, has architectural competition now come, that the profession should bestir themselves earnestly as a body to abate at least those evils in it which they cannot perhaps wholly correct. No doubt it would be a work of difficulty; therefore the effort to produce reform should be energetic in proportion; whereas, as yet, no real effort has been made at all. A little squeaking now and then does no good: a hundred voices or pens are required in order to protest against the actual system with any effect, and to rouse the attention of public opinion to it.

AN ARCHITECT.

THE CARLTON CLUB.

WE have received letters from two members of the club complaining that the architect's plans have been altered, so that instead of the doorway being in the *centre* of the façade in Pall-mall, it will be at the western *end*, occupying the room of the *second* window of the present coffee-room. Of course, that room must be entirely altered. The alteration, they say, will cost *at least* 10,000*l.*—perhaps more. What they specially direct attention to is the injury which will be done to the building externally by placing the door at the end of the front.

CITY OF LONDON FREEMEN'S ORPHAN SCHOOL.

WE told our readers the other day of the opening of the Orphan School, nobly founded by the City of London, at Brixton, and gave some particulars of the structure (p. 173). These particulars will be made clear by the accompanying plan of the ground-floor, and view of the principal elevation. It is intended, as we then said, for the accommodation of about 100 children, and was built by the Messrs. Piper, from the designs of Mr. Bunning.

The front of the school is of red brick. The dressings are of Portland cement,—the city arms and supporters carved in Portland stone, by Mr. Henning and his Son, by whom also, as we said, the internal modelling after Hogarth was done. The roof over the dining-hall is framed in wood, with iron rod ties across: the whole of the roof for about 6 feet down from the ridge is glazed with rough plate-glass.

When Mr. Bunning's health was proposed after dinner on the day of opening, he alluded happily to the sculpture on the stairs—Whittington on the boys' side, and Helen Walker on the girls'—as historical statues, with their histories and associations, taking the place of the conventional charity boy and girl in their accustomed costume. His allusion at the same time to Hogarth and his doings, and the natural connection with his contemporaries to which the reliefs in the dining-hall might lead, and the influence thereby to be produced in the youthful mind, was a good suggestion well applied.

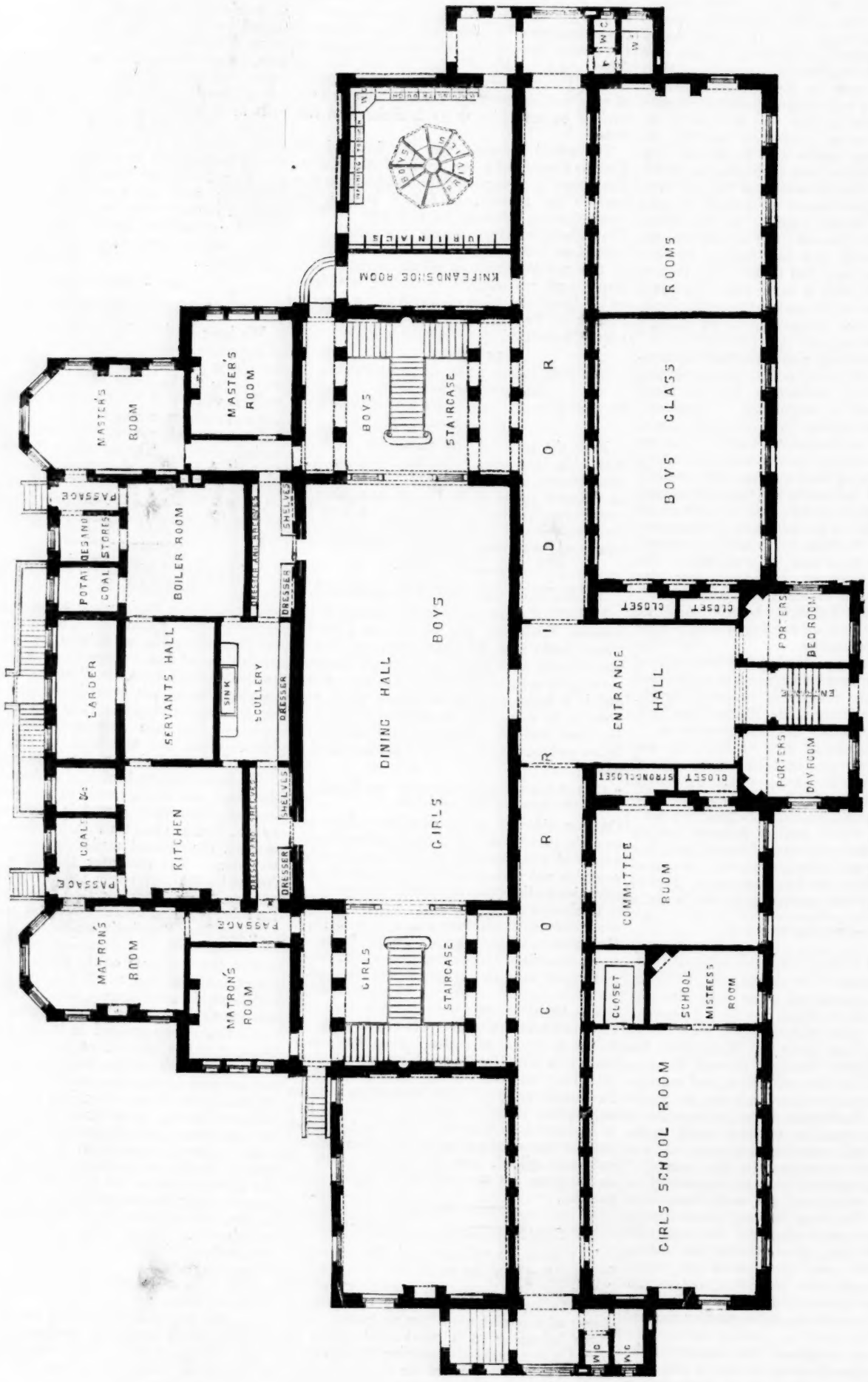
The general arrangement is, that the boys occupy the right wing, the girls the left; but as the boys outnumber the girls, the whole of the two-pair story is appropriated as a dormitory for the boys, and a moiety of the one-pair forms an infirmary. The residence of the master is behind the boys' portion, and that of the mistress behind the girls'.

It is right to mention that Mr. Benham, of Wigmore-street, put up the hot-water apparatus, and provided the cooking paraphernalia, in which are all the modern appliances.

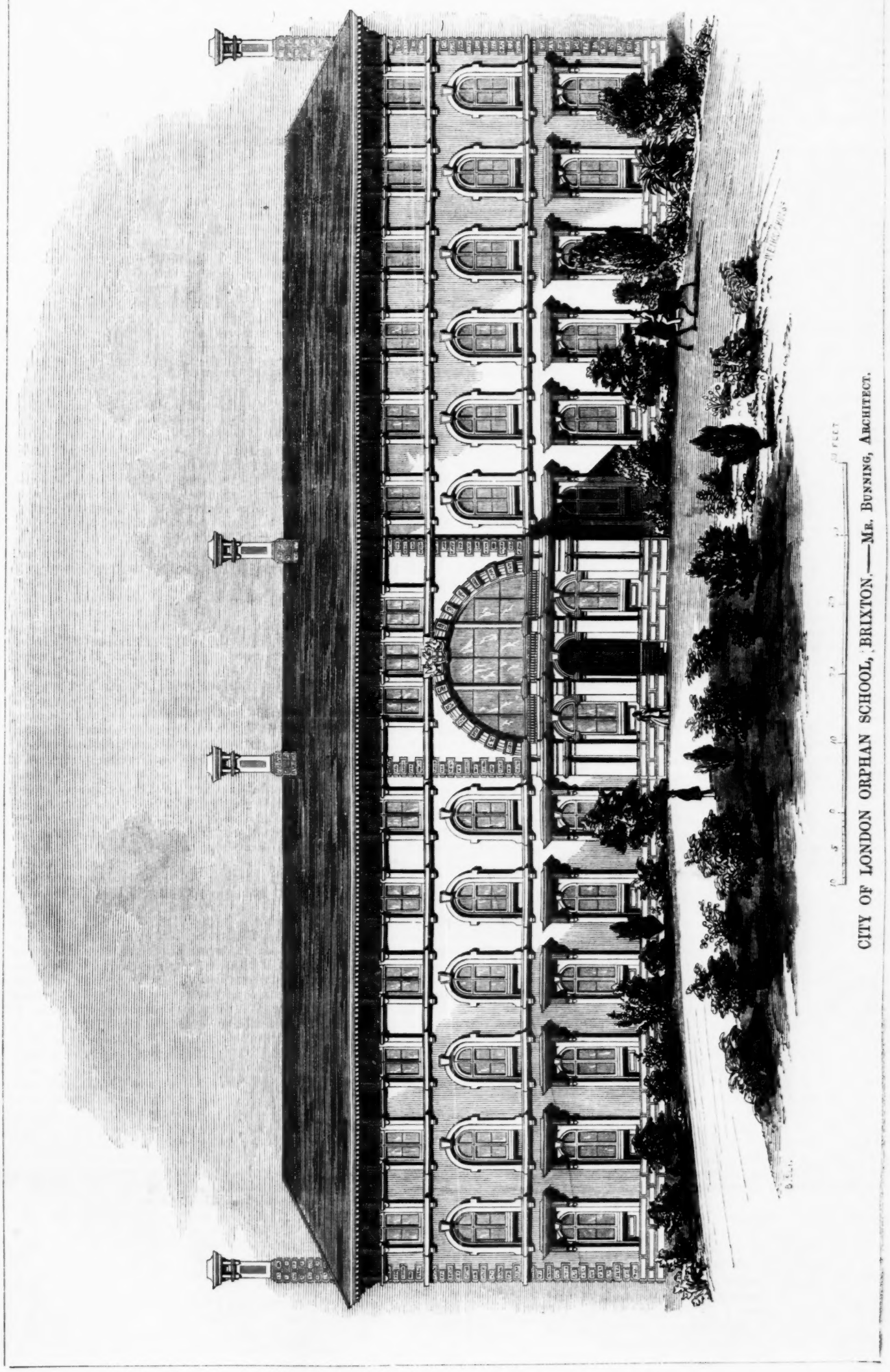
The external cornice, which makes the gutter, is formed of plate-iron galvanized, and the consoles are of cast-iron.

FALL OF HOME TIMBER.—The present high price of timber is said to be inducing many of the landed proprietors of this country to convert large quantities of their timber into money.

* A view is given in the *Brighton Herald* of April 15.



GROUND PLAN OF CITY OF LONDON ORPHAN SCHOOL.



CITY OF LONDON ORPHAN SCHOOL, BRIXTON.—Mr. Bunning, Architect.

A DESPATCH FROM WEST HARTLEPOOL.

IT is wonderful what has taken place here within the last three years. On a former visit the West Harbour, although in a very unfinished state, was then giving strong evidence of its great utility by sheltering many a frail bark from the pitiless storm. One dock only was then open. The great importance of the position soon rendered another dock necessary: this was opened with great ceremony and rejoicings last year, and upon my recent visit an army of "navvies" was occupied in penetrating mother earth for still another dock.

Only a few years back the whole of that part of the ground lying west of Hartlepool was barren, yielding little or no profit: it now bids fair to be one of the most important commercial stations in the country. With the increase of shipping have come increase of supply, increase of accommodation, population,—man's wants, physical and moral: houses are springing up in all directions, streets stretching out from the centre of business, the docks north, south, east, and west. Fearless of consequences, and unawed by the restrictions of a Building Act, foundations are dug in the recently-deposited ballast brought in in exchange for the coal or other merchandize, which is to be freighted to some far distant shore. Reckless of the future, yards of land are bought and houses *run* up two and sometimes three stories in height, with walls of the *immense thickness of half a brick*, joists like laths, sea sand, pine timber, and every other enormity necessary for turning money quickly: true it is that a puff of wind occasionally levels a few of these frail edifices, and the recurrence of walls blown down and a roof unshipped reminds me very much of the palmy days of railway engineering, when, if a *few* bridges fell down, nothing further was thought of than to sweep away the rubbish and begin again.

Fortunately, some little attention has been paid to the laying out of the streets: the main streets are wide and sufficient for their purpose, but the small streets are narrow, close, and will, I fear, become unhealthy. A good open space is being left about the new church. I have, perhaps, said sufficient about the houses; yet, bad as they are, all new places spring up in the same manner: you can hardly expect the first *settlers* to do more than provide a mere protection for themselves and their merchandise: they put all their money into their "*venture*," and care not for appearances. A time hence, when fortunes are made—and they will be made here—the luxury of architecture will dawn upon them: even at this time, a dream of the art has been embodied in the "Athenæum," in Church-street. Abortion as it is, I suppose it must be considered architecture, as it possesses pilasters, at every conceivable variety of distance apart from each other, an entablature of the most *original* design, a combination of form in the contour of arches, the profiling of mouldings, and the unity of form and material that *might* satisfy the most inordinate lover of the picturesque and the original. I believe this was the first building of any consequence erected at West Hartlepool, and I am informed it has answered its objects admirably. Close to the docks, the dock-office forms, with its clock-tower and generally solid looking character, an agreeable though plain building: the houses facing the docks have certainly a better appearance than those farther off, but I understand these houses are all built in the same slight manner. One thing I noticed, which is practically a very good thing, and that is, the shop-shutters are all, or nearly so, revolving shutters, made of boards, of course increasing in width as the circumference increases round the axis.

Stone is very abundant here, and lime excellent, and it astonishes me that stone is so seldom used in the houses: true it is that the houses could not be built in such a card-like fashion with stone, or perhaps the labour would be too great: be this as it may, stone—and it is a beautiful stone here—is only used in the larger buildings.

At the end of Church-street a large church has been built, now nearly completed: this building is another step in the right way: it is a large building with lofty western tower: the style of the architecture is of the thirteenth century; and although very plain, its massive features render it one of the most striking edifices of the kind in this part of the country. It is erected, I may say, almost in the quarry from which the stone has been procured: it is cruciform and rather singular in its plan.

The four piers at the intersection of the nave and chancel with the transepts, support stone arches: the centre portion is covered with an open timber arched roof, surmounted with a lantern. All the other roofs are of open timber framing, with arches upon stone corbels. The length of the building from the west door of the tower to the east end of the chancel is about 150 feet, and across the transepts about 89 feet. In all the windows there is some stained glass, principally in the borders: the general glazing is in ornamental patterns. Mr. E. B. Lamb is the architect.

There is still much to do at West Hartlepool, but the energy of the powers that be, and the desire to establish a good town suitable to the increasing wants of its commerce, will, I have no doubt, eventually be the means of obtaining this great desideratum. VIATOR.

PURIFICATION OF COAL GAS.

EVEN those who insist on the comparative purity of our metropolitan gas have admitted, so far as regards one of the most obnoxious of its defilements, namely, sulphuret of carbon, not only that it *is* contaminated with this impurity, but that all endeavours to withdraw it, short of destruction of the gas itself as an illuminator, have hitherto been fruitless. It ought to afford the gas companies high gratification, therefore, to learn that it is positively asserted that this grand desideratum has at length been attained, and that the alleged means of withdrawing, not only the sulphuret of carbon, but at same time the ammonia with which admittedly their gas is also contaminated, are so simple, so available, and so easily applied, that no new or expensive apparatus whatever is requisite in order to accomplish an end which will not only remove more than one constant source of mischief, but greatly enhance the illuminative power, and hence the value of their gas, and that, too, at a cost to themselves almost nominal. All that is necessary, it is stated, is to use strata of hydrated clay along with the lime usually employed in the purification of coal gas. The efficacy of this mode of purification has already been tested, it appears, at the Wakefield gasworks, on upwards of 3,000,000 cubic feet of gas. The discovery is a practical one, which, in fact, has been patented jointly by the chairman of the Wakefield Gasworks, Mr. W. Statter, and another gentleman, also resident at Wakefield, namely, the Rev. W. R. Bowditch.

Hydrated clay, like some few other interesting chemical substances, forms threefold combinations, and so, in this case, effects its purpose. It not only unites, it is said, with the ammonia of the gas as with a base, but at same time with its sulphuret of carbon as with an acid, and thus removes both of these noxious impurities from the gas exposed to its influence. Its good offices are said to be not even limited to these; as, in alternation with the lime of the usual purifiers, it assists in removing tarry vapour and other impurities.

The illuminative power of the gas, moreover, is thus said to be positively increasable from 22 to 33⅓ per cent.

The following results are given as rather below than above the average of a considerable series of experiments:—

"Feb. 14th, 1854.—Gas made with one-seventh cannel coal:—Lime purification: 5 feet of gas burnt per hour gave light equal to 12¼ sperm candles. Clay purification: 5 feet of gas burnt per hour gave light equal to 15 sperm candles. Gain: Light of 55 candles per 100 feet of gas, or 100 feet clayed equal to 125 limed (nearly).

March 2nd and 3rd.—No cannel coal used:—Lime purification: 5 feet of gas burnt per hour gave light equal to 11½ sperm candles. Clay purification: 5 feet of gas burnt per hour gave light equal to 15¼ sperm candles. Gain: Light of 75 candles per 100 feet of gas, or 100 feet clayed equal to 132½ feet limed."

On this point the patentees say:—

"An increase of light, ranging from ¼ to ⅓ is an improvement upon which most gas companies would have felicitated themselves had it, and *it only*, been attained by superior management, at a cost of no more than ½d. per 1,000 cubic feet: the production of light is the object of gas manufacture, and the advantage just named may be expressed commercially as an increase of about ¼ of the article produced, at an expense of $\frac{1}{10}$ of the cost of production—gas being assumed to cost 1s. 8d. per 1,000 feet. Practice cannot but receive with gratitude the boon presented for acceptance by her parent Science."

Of course, we are not blind to the circumstance that the patentees of this invention have a personal interest in giving as high a colouring as possible to the alleged advantages of their patented discovery. We merely quote their statements in order to show that it is not only the duty but the self-interest of the gas companies to look into this matter, and at least to give the proposed method a fair trial, since they acknowledge that the removal of sulphuret of carbon is a great desideratum which is yet to be realised. There is, moreover, we think, a high probability that there is little or no exaggeration in what is alleged. The result of the use of clay at Wakefield is distinctly stated to be uniformly successful, and to bear out all that is said of its value.

Clay or alumina is one of the cheapest and most abundant substances in nature. Its cost, therefore, is out of the question, even although no positive benefit in increased illuminative power were attainable by its use. The only expense to speak of in testing its utility will be the cost of licence from the patentees, which will be as nothing when placed in competition with the alleged advantages. We feel more assured than ever, then, that the day is at hand when our metropolitan gas will indeed be so pure that it will find ready and extensive access to our private dwellings, and that the only points to be further urged to that desirable end will relate to the requisite general arrangements as to fittings and as to ventilation,—both of these points of great practical importance, to which we have repeatedly drawn attention, and on which we shall yet again, and very soon we hope, have more urgent reason than ever to dwell.

PROVINCIAL NEWS.

Spalding.—Four tenders were offered to the Local Improvement Commissioners for the two chapels in the cemetery here, viz. Mr. W. Sharman, for cemetery chapels, 1,690*l.* and the wall at 9s. 3d. per yard, 387*l.* 11s. 6d.; Mr. Cousins's tender for the boundary wall only, 93*l.* Mr. Dolman's, which was accepted, is as follows: for the two cemetery chapels, lodge, gate, front wall, and pallisades, 1,846*l.* and the wall round the cemetery, 838 yards, at 8s. 3*3l.*; total, 2,181*l.* The whole to be completed in six months. Mr. Pilkinton, the architect, attended with plans of the chapels, lodge, &c. when a lengthy discussion arose about the ornamental crosses proposed to be placed on the chapels. The architect urged that the cross was being adopted even by Dissenters, as an ecclesiastical ornament for their chapels. The proposal, however, was rejected, although the Rev. G. N. Wright, and the chairman, while expressing themselves opposed to popery, considered these buildings should be distinguished from barns or corn exchanges. A discussion then arose as to the road, when it was stated that 45*l.* a mile was not an unfair cost to keep them in repair. It was resolved that the cemetery be proceeded with at once. The Royal Exchange Office had agreed to grant the loan of 7,500*l.* at 5 per cent.——The site of the new Corn Exchange is settled: the new building will therefore be commenced as soon as possible.

Hertford.—The foundation stone of new almshouses, in place of those at Butcherly-green, was laid near the new School of Industry on Monday week by Mr. Townshend.

Bedford.—The Bedford Schools Committee have resolved that a report should be prepared, and presented to a special meeting of the trustees, recommending that advertisements be inserted in the local newspapers, offering a

premium for the best plan of enlarging the schools.

West Tarring.—This fine old Sussex church has been completely restored, under the direction of Mr. Joseph Peacock, architect. Entire new roofs have been put to the nave and aisles with open timbers, and covered with Horsham stone. The whole of the church has been reseated with open benches, and the aisles paved with black and red tiles. The pulpit and reading-desk are of carved oak, enriched with the tooth ornament, and stand near the chancel arch. The font, which is central, is relieved by a carved screen beneath the tower arch. It is of Caen stone, supported on eight Purbeck marble shafts, and is a restoration from a portion of the base of the old font. A memorial window has been placed in the south aisle embodying the two great commandments, and illustrated by the parable of "The Good Samaritan," and "Christ Feeding the Multitude." The font and window (in memory of the late John Lucas, of Heene) are presented by members of the family, otherwise large contributors also. The works were executed by Mr. Myers. The cost, 2,200*l.* The chancel has been *repaired only* by the Ecclesiastical Commissioners for England. The restorations are mainly attributable to the continued exertions of the vicar, the Rev. John Wood Masters.

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Arkindale.—The foundation-stone of a "Free Christian" chapel and Sunday-school, according to the *Gateshead Observer*, was laid on 8th inst. at Arkindale, near Richmond, in Yorkshire, by Mrs. Bateman, of London. The site has been presented by Mr. Jaques, of Easby; and the Earl and Countess of Zetland have contributed to the building fund.

Kelso.—A committee has been appointed at a meeting of farmers and landlords, in order to consider as to the erection of a covered corn-exchange in Kelso.

SIGHTS AND SCENERY.

The Haymarket Theatre.—Easter has set the scene-painters and machinists to work, although not to the same extent as on some previous occasions, the Lyceum and the Olympic contenting themselves with light pieces not requiring decorations. For the piece at the Haymarket, "Mr. Buckstone's Voyage round the Globe, in Leicester-square" (say, "Thank ye," Mr. Wyld), a dramatic review by Mr. Planché, touching brilliantly the events and exhibitions of the day, some exceedingly good scenery has been painted by Mr. Callcott, including the Straits of Gibraltar, the *Ripon* steamer, with the Grenadiers on board, on her passage to Malta, Constantinople, and the Golden Horn. There is also a clever representation of the front of the theatre, with which the piece opens, but in some parts advantage has scarcely been taken by the artists of those opportunities which Mr. Planché knows so well how to give, and which have materially assisted to raise the position of the scene-painter in the eyes of the public. The piece was a complete success, nor could it be otherwise: it is full of point and amusement, and should fill the house for many nights to come.

The Adelphi Theatre.—The opening scene for the Easter piece here, "The Overland Journey to Constantinople," a Fairy Encampment, is very effective, and the same may be said of several others, and of the whole getting up. The piece is not written *exactly* like the last we spoke of, but it is nevertheless very amusing and showy. If it were our practice to go into the merits of a drama, we should use some strong terms of praise in speaking of "Two Loves and a Life," which is being played here, and which ought to be visited by every playgoer, as well for the merits of the acting of Madame Celeste (vigorous and discriminating), Miss Woolgar (tender and elegant), Webster (subtle and refined), Leigh Murray (manly and clear), and Keeley (richly comical), as for the excellence of the piece itself. It has not had half the praise it deserves.

The Cyclorama, at the Colosseum.—The destruction of Lisbon, exhibited here for some time, has given place to a series of large dioramic pictures, painted by Mr. J. McNevin, representing Naples and its neighbourhood, Vesuvius, and the excavated city of Pompeii, including, as a termination, a view during the eruption which buried it. The declivities around the bay, lined with villas and hallowed by associations, the lovely hill of the Vomero, Portici, Torre del Greco, illuminated for a fête, and the embalmed Pompeii, as it is now seen, are charmingly painted. The views of the latter give a better notion of its appearance than is usually conveyed. The closing scene represents the amphitheatre as it now appears, with Vesuvius smoking behind, when suddenly, with clash and bang, darkness and flames fill the air, the amphitheatre is seen filled with an affrighted multitude, and the streaming lava and falling ashes leave no hope of escape to any. The execution of this effect, a transparency, is inferior to the rest of the work, but it has its value in telling the story.

Canada, next the Polytechnic.—In the theatre next door to the Polytechnic, Regent-street, Mr. W. F. Friend has set up a moving Diorama of Canada and the United States, with the descent of the Niagara and St. Lawrence, painted from his own sketches by himself, in conjunction with Mr. Henry Warren, Mr. E. G. Warren, and Mr. Weigall. It is for the most part brilliantly painted, and, aided by pleasant descriptions modestly delivered by the artist himself, and various songs and glees, forms an exceedingly agreeable as well as instructive entertainment. Niagara is particularly well set forth, and there is a clever view of the Great Victoria Iron Tubular Bridge across the St. Lawrence, two miles long, and forming part of the Canadian Grand Trunk Railway. It closes with a bustling view of New York by night on the 4th of July, the anniversary of American independence, and well deserves a visit.

BELFAST GOVERNMENT SCHOOL OF ART.

THE annual meeting and *conversazione* of the patrons and friends of this institution was held a few days since in the rooms of the establishment, College-square North. A very large and fashionable assemblage of the gentry of the town and neighbourhood, of whom at least half were ladies, attended to witness the proceedings. The various apartments of the building were arranged with taste and elegance, one of them specially devoted to an exhibition of practical art in manufactured goods.

The mayor was voted to the chair. The secretary, Mr. S. Vance, read the report, which stated that during the year a considerable addition had been made to the library, and examples of art, and that the number of pupils attending the various classes within the walls and in public schools connected with the School of Art were,—Public classes, females, 9; males, 100. Governess' class, 12; ladies' class, 29; gentlemen's, 14. May-street National School, 37; Fountain-street National School, 27; Rev. Mr. Hanlon's, 17. Total, 245. The committee hoped that, during the coming year, a considerable number would be added to the various classes, and they had no doubt that the best exertion of Mr. Nursey and Mr. Wood would be employed to give efficiency to the new arrangement.

Mr. Cairns, M.P. delivered the annual address, in course of which, and while meeting objections to the cultivation of art in our manufactures, he made some remarks on the history of paperhanging which we may briefly quote:—"The objector will say, 'Look at the French papers which ornament our rooms, and you will constantly find on them the best designs, and that ought to show that the French people have some peculiar style which we cannot arrive at.' Now, I say, take this very case of French paperhanging. The fact is, that fifty years ago the whole of the paperhanging trade was in the hands of English manufacturers. What happened then? The English manufacturers, satisfied with the practical monopoly of the trade, and free from all competition, turned their attention rather to the production of a paper remarkable for its cheapness and the improvement of the mere material, than to the improvement of the patterns on the paper; and they continued to reproduce the old patterns; or if they brought out new ones, such

as were not composed with any attention to the rules of taste or art. Whilst this was going on in England, there commenced in France that artistic education of the population to which I have referred, and one of the first subjects of its operation was paperhanging. The artisans, therefore, who were instructed in the Government schools found it very easy to produce patterns infinitely superior to anything in England. Consequently, they got a-head of the English manufacturers, and that superiority they obtained partly by their having the first start in the matter, and partly by the supineness of the English manufacturers, and they have maintained it to the present day; so that it is quite true that we get the best papers from France, but it is also true that this is owing to the circumstance that the English manufacturers did not choose to do that justice to their product which a little care and pains would have afforded. But we have a proof that the art has not left the country, and that if the artists are properly trained we can yet resuscitate the trade. That proof is this: Mr. Owen Jones educated a band of men in elementary instruction in drawing, and within eighteen months he produced papers, manufactured in England, and with patterns designed there, which, in the opinion of every one in England and on the Continent who has seen them and is competent to judge, are superior to anything that has been brought out in France. This was because the attention of these men was brought to bear on the subject, and because they were placed under the instructions of one who was competent to guide them."

PROCEEDINGS UNDER METROPOLITAN BUILDINGS ACT.

Sewell (Appellant) *v.* Badger (District Surveyor, Respondent).

This case was heard at the Sessions-house, Maidstone, on the 4th of April, before the Earl of Romney and a bench of magistrates.

Mr. Clarkson, in opening the case for appellant, stated that a conviction had been made by Mr. Secker, the magistrate at Greenwich, against Messrs. Sewell, builders at Sydenham, at the instance of Mr. Badger, on the ground that due facilities had not been afforded him, as district-surveyor, in inspecting a building at Longton-grove, Sydenham, erected, at first, as an insulated building, but which was afterwards converted into two dwellings, by bricking up certain openings, originally left in the main division wall (which was built of the requisite thickness for a party-wall), and surveyed throughout by Mr. Badger from the commencement to its completion. The builder had given his first notice to the district-surveyor for an insulated building; and a second notice when he proposed to alter it into two. The district-surveyor, however, considered that Messrs. Sewell were endeavouring to defraud him of the fees to which he was entitled under the Act, and made application to the magistrate for the purpose of taking proceedings by way of penalties; but the magistrate refused to entertain it. Mr. Badger then went before the official referees, under the 14th section, when Mr. Clarkson attended for Messrs. Sewell; and the referees, after due deliberation, awarded that "there was no evidence of any act done by Messrs. Sewell contrary to the statute;" and ordered Mr. Badger to pay the costs of the award, as also the costs of Messrs. Sewell. The award was taken up by the builders, who applied to the district-surveyor for their expenses, which he refused to pay. A notice was then served by him on Messrs. Sewell of his intention to make a survey of the party-wall, and for that purpose required them to open the foundations,—to cut into the chimney-breasts and lay open the flues,—to take up the floors and portions of the several ceilings in order to exhibit the trimmers and timbers of partitions, together with various other cuttings and maimings, which were considered by the builders as amounting to a partial destruction of the building. On the non-performance of these requirements, the district surveyor took out a summons, and Messrs. Sewell being unable to attend before the magistrate, the present conviction was obtained. Mr. Clarkson then stated that it was against this conviction Messrs. Sewell were advised to appeal, and intimated to the Court that his learned friend (Mr. Horn) held a retainer on the part of the respondent, though he was not instructed to support the conviction; and as this would have the effect of putting the appellants, whom he represented, to the enormous expense of coming down there (twelve witnesses being in attendance), gross injustice might be done, if the appeal was well founded, by no party appearing to support the conviction.

The Magistrates, after a short conference, announced through the noble chairman, that they had come to the determination to quash the conviction.

Mr. Clarkson then addressed the bench to be allowed to prove his notice of appeal, and the recognizances that had been entered into, and urged that he was entitled to ask for the costs.

Mr. Horn, on behalf of the respondent, interposed by stating that Mr. Badger had been subpœnaed to attend the Assizes at Kingston, and that, as he had only that moment received instructions to defend his client, he intreated the Court to reconsider its decision, or to allow the case to stand over to the summer sessions.

The Bench again conferred, when the Chairman stated that, as the conviction had been quashed, Mr. Horn could only be heard as to the application for costs.

Much warm discussion took place between the counsel on both sides, when Mr. Horn, on behalf of the respondent, stated that he was not prepared to go on with the case, and he would rather pay the costs of the day, and let the matter drop altogether.

The Chairman announced the conviction to be quashed, and the costs to be paid by Mr. Badger.

The case excited great interest, and will be a costly one.

A "SUBLIME STORE" AT PHILADELPHIA.

An American "Subscriber from the beginning," with the signature C. L. writes us from Philadelphia, drawing our attention to what he calls "one of our sublime stores that we build," and which the local *Ledger* calls "a business palace." The store is five stories high, with a front of Quincey granite on Market-street, and pressed brick, with heavy granite dressing, on Commerce-street. It is between 27 and 28 feet broad, and 205½ feet long. To the first and second stories are added a wing 28 by 31 feet, on the west side. The main entrance is through a vestibule, 8 by 12 feet, adorned with tesselated marble. This leads to the first floor, which is finished in the most elaborate and splendid manner. The shelving is decorated with ornamental pilasters, having carved caps and a rich entablature. A handsomely-carved cornice, tipped with gold, extends around the entire room, with enriched brackets and dentils, in keeping with the frescoed (?) walls and ceiling, and the elegant bronzed chandeliers, of new and beautiful pattern, producing an attractive and gorgeous effect. The stairs in the wing or tower are elliptical in their design, and extend from the passage in the sub-cellar to the roof, seven stories, or nearly 80 feet high. They have massive carved oak rails, capped with black walnut and ash. The second story is finished in a style very similar to the first, with a counting-room, splendidly furnished, and a room in the rear, cut off by a glass partition, for a sample-room. This is to be fitted up in the same gorgeous manner with other parts of the store, and is to be covered with a fine Brussels carpet. The walls and ceiling are also frescoed, and much care has been taken to arrange the colours so as to throw the proper shades on the various kinds of goods. Adjoining this is the hatchway and hoisting-machine, extending from the first to the fifth floors, which is an entire new arrangement. The third floor has a bath-room, with hot and cold water, &c. The two upper stories are the same as those below, except that the walls are plain. This store has been built with the very best materials, and the workmanship is acknowledged to be of the very finest character. There are upwards of 150,000 feet of joists, each four by 15 inches. The quantity of lumber used is upwards of 252,000 feet, with nearly 40,500 feet of shelving. Communication can be had by trumpets and bells with every floor. The whole establishment is brilliantly illuminated. The chandeliers are bronze, relieved with gold, and "quite pretty." The architect is Mr. J. C. Hoxie; builder and superintendent, Mr. Charles A. Rubicam; the painter, John Gibson; the maker of the counting-room, desks, and furniture, J. T. Hamitt; plumbers, Forsyth and Brother; excavator, William Wilt; stonemason, Michael Carman; bricklayer, David Thorne; plasterer, James Spencely; smith-workers, Stewart and O'Hare; tin-workers, Ford and Melloy. The granite front, which both for design and execution excels any similar structure in the city, was put up by S. K. Hoxie. Our correspondent only wishes they had some of our "English critics to tell them which is Gothic and which is Grecian" in some of these "splendid architectural piles."

Notices of Books.

An Account of the Progress of the Expedition to Central Africa, performed, by order of her Majesty's Foreign-office, under Messrs. Richardson, Barth, Overweg, and Vogel, in 1850-53. By Augustus Petermann, F.R.G.S. London. 1854.

A virulent attack was made on the progress of this expedition in the *Nautical Standard* of January last, merely, as it would appear, on the narrow-minded ground that its survivors are both Germans, though acting under the British Government. It is even believed that an official connected with the Geographical Society, had something to do with it, and at all events, while in the "authorized report" of a meeting of the Society, a paper actually giving an account of the progress of the expedition was suppressed; an attack, in form of a speech also given, had been very prominently published, in juxtaposition to this "authorised report" of the proceedings. This is an instance of the danger of allowing secretaries too much license in dealing with reports and papers. In this instance, Mr. Petermann deals very summarily with the attack upon his countrymen, first knocking their assailants down with his great folio, published "by authority of her Majesty's Foreign-office," and then cutting them up into small pieces, in a "Letter" of his own, addressed to the President and Council of the Society.

VARIORUM.

The Kilkenny Archæological Society's Transactions for the year 1852, forming Vol. II. Part I. of the doings of this active and prominent Association, are now on our table, and, as already intimated, by new arrangements the proceedings of the present year are to be facilitated and issued as speedily as possible in portions after the papers have been read. The present volume is fully illustrated, and contains a large mass of archæological, architectural, and antiquarian lore.——A reissue of Mr. Knight's very popular "Land we live in," in threepenny monthly or weekly parts, by Messrs. Orr, of Paternoster-row, will gratify a class heretofore shut out from its pleasant pages. It appears just as it did before, in good bold type, on large octavo, with illustrations.——Orr's "Circle of the Sciences" is thriving. The last number contains the commencement of a treatise on the mathematical sciences, by Professor Young; and the previous number, a continuation of Professor Owen's Treatise on the "Forms and Structures of the Teeth."——The "Home Companion" (the same publisher) has taken a fresh and more convenient shape, and maintains its character as an interesting publication.

Miscellanea.

Lambeth: a new Move in Trade.—On Saturday last was launched from the dock, Nine-elms, a fine merchant ship of 500 tons, the first and largest vessel of her class that has been built in this part of the Thames. Her bottom is fashioned like the large coal barges, with ships' upper works, and with a spacious flush deck, and *will draw only* 10 *feet of water*, giving ample room for stowing timber, tallow, hides, &c.; being intended for the East country trade. Steam-power can also be applied, if required. She went off in capital style, and was named by the owner's daughter, Louisa Shelbourne, after whom she is called. She is sheathed with Belgian zinc, fastened with zinc nails. This metal is now 75 per cent. higher than it was at the Great Exhibition. Copper is much stronger, and could have been used with better effect, 12 oz. per foot lighter than this vessel is sheathed with: less labour would be also required, and for *hard work, surely the very best material should always be chosen.* And if strips of zinc, 8 inches by 2 inches, were screwed on each course of copper, the galvanic influence would prevent oxidation of the copper, and keep the barnacles from fastening on the metal. I can testify to a case where, after twenty months, a vessel returned from her voyage with the copper as clean as a mahogany table.—B.

Buildings in Brighton.—I can bear testimony to the scamping manner buildings are erected by men who dub themselves builders, engaged on houses of magnitude near to me. I view with regret the very dangerous mode of forming boarded trimmers instead of brick, and using as a substitute for stone, Baylis or cement hearths, in many cases, I see, not an inch thick. Heat causes the boards to contract and crack the cement. An old-established builder related a case that came under his especial notice, in Lansdown-place, not long since: the boards ignited from this cause. In the house I am now staying in, though recently erected, the joiner's work is the climax of scamping; doors shrinking at every joint, stairs cracking as you ascend or descend, partitions shrunk for want of proper trussing, window-frames loose and separated from the brickwork. What can be expected when most of the works are prepared, in the buildings during their progress, of unseasoned materials. There are several very respectable old-established builders here who perform works in the best manner, as many London architects can testify.—Pro Bono Publico.

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Sheffield.—The ceremony of consecrating Brightside Church was performed by the Archbishop of York, on Wednesday before last. The church is a Gothic edifice, erected on land given by Earl Fitzwilliam, at the south end of Grimesthorpe, at a cost of about 1,600*l.* The vestry-window, which is of stained glass, has been presented by Mr. R. Drury, of Sheffield. The Rev. Canon Blackburn, while preaching the consecration sermon, stated that, in 1846 and 1848, fifteen districts had been formed in the parish of Sheffield, and more were about to be made: eight new churches had been raised, and an additional number were about to be erected: thus, within the same period no less than 22,000 new churches and 1,255 new parishes had been formed in the country, at a cost to the state of 1,663,429*l.* and to private benevolence of 7,423,571*l.* In the same period much had been done by other Protestant bodies.——Since the monument to the late Ebenezer Elliott was projected in Sheffield, many of the friends of the late Corn-law Rhymer have begun to entertain apprehensions that it was destined to remain a "figure of speech" only. A letter from Mr. Roebuck, M.P. to one of his constituents, has, however, had the effect of removing their misgivings. Mr. Roebuck reports that he has seen the statue, which only awaits a few finishing touches at the hands of the sculptor; and that it bears all the appearance of a good likeness, and is easy and natural in character and position.

Cotham.—A new east window has lately been placed in Balderton Church by the Millington family. A window on the south side has also been repaired and filled with stained glass by Wailes; the whole completed under the superintendence of Mr. Charles Baily, of Newark.

Arkindale.—The foundation-stone of a "Free Christian" chapel and Sunday-school, according to the *Gateshead Observer*, was laid on 8th inst. at Arkindale, near Richmond, in Yorkshire, by Mrs. Bateman, of London. The site has been presented by Mr. Jaques, of Easby; and the Earl and Countess of Zetland have contributed to the building fund.

Kelso.—A committee has been appointed at a meeting of farmers and landlords, in order to consider as to the erection of a covered corn-exchange in Kelso.

SIGHTS AND SCENERY.

The Haymarket Theatre.—Easter has set the scene-painters and machinists to work, although not to the same extent as on some previous occasions, the Lyceum and the Olympic contenting themselves with light pieces not requiring decorations. For the piece at the Haymarket, "Mr. Buckstone's Voyage round the Globe, in Leicester-square" (say, "Thank ye," Mr. Wyld), a dramatic review by Mr. Planché, touching brilliantly the events and exhibitions of the day, some exceedingly good scenery has been painted by Mr. Callcott, including the Straits of Gibraltar, the *Ripon* steamer, with the Grenadiers on board, on her passage to Malta, Constantinople, and the Golden Horn. There is also a clever representation of the front of the theatre, with which the piece opens, but in some parts advantage has scarcely been taken by the artists of those opportunities which Mr. Planché knows so well how to give, and which have materially assisted to raise the position of the scene-painter in the eyes of the public. The piece was a complete success, nor could it be otherwise: it is full of point and amusement, and should fill the house for many nights to come.

The Adelphi Theatre.—The opening scene for the Easter piece here, "The Overland Journey to Constantinople," a Fairy Encampment, is very effective, and the same may be said of several others, and of the whole getting up. The piece is not written *exactly* like the last we spoke of, but it is nevertheless very amusing and showy. If it were our practice to go into the merits of a drama, we should use some strong terms of praise in speaking of "Two Loves and a Life," which is being played here, and which ought to be visited by every playgoer, as well for the merits of the acting of Madame Celeste (vigorous and discriminating), Miss Woolgar (tender and elegant), Webster (subtle and refined), Leigh Murray (manly and clear), and Keeley (richly comical), as for the excellence of the piece itself. It has not had half the praise it deserves.

The Cyclorama, at the Colosseum.—The destruction of Lisbon, exhibited here for some time, has given place to a series of large dioramic pictures, painted by Mr. J. McNevin, representing Naples and its neighbourhood, Vesuvius, and the excavated city of Pompeii, including, as a termination, a view during the eruption which buried it. The declivities around the bay, lined with villas and hallowed by associations, the lovely hill of the Vomero, Portici, Torre del Greco, illuminated for a fête, and the embalmed Pompeii, as it is now seen, are charmingly painted. The views of the latter give a better notion of its appearance than is usually conveyed. The closing scene represents the amphitheatre as it now appears, with Vesuvius smoking behind, when suddenly, with clash and bang, darkness and flames fill the air, the amphitheatre is seen filled with an affrighted multitude, and the streaming lava and falling ashes leave no hope of escape to any. The execution of this effect, a transparency, is inferior to the rest of the work, but it has its value in telling the story.

Canada, next the Polytechnic.—In the theatre next door to the Polytechnic, Regent-street, Mr. W. F. Friend has set up a moving Diorama of Canada and the United States, with the descent of the Niagara and St. Lawrence, painted from his own sketches by himself, in conjunction with Mr. Henry Warren, Mr. E. G. Warren, and Mr. Weigall. It is for the most part brilliantly painted, and, aided by pleasant descriptions modestly delivered by the artist himself, and various songs and glees, forms an exceedingly agreeable as well as instructive entertainment. Niagara is particularly well set forth, and there is a clever view of the Great Victoria Iron Tubular Bridge across the St. Lawrence, two miles long, and forming part of the Canadian Grand Trunk Railway. It closes with a bustling view of New York by night on the 4th of July, the anniversary of American independence, and well deserves a visit.

BELFAST GOVERNMENT SCHOOL OF ART.

THE annual meeting and *conversazione* of the patrons and friends of this institution was held a few days since in the rooms of the establishment, College-square North. A very large and fashionable assemblage of the gentry of the town and neighbourhood, of whom at least half were ladies, attended to witness the proceedings. The various apartments of the building were arranged with taste and elegance, one of them specially devoted to an exhibition of practical art in manufactured goods.

The mayor was voted to the chair. The secretary, Mr. S. Vance, read the report, which stated that during the year a considerable addition had been made to the library, and examples of art, and that the number of pupils attending the various classes within the walls and in public schools connected with the School of Art were,—Public classes, females, 9; males, 100. Governess' class, 12; ladies' class, 29; gentlemen's, 14. May-street National School, 37; Fountain-street National School, 27; Rev. Mr. Hanlon's, 17. Total, 245. The committee hoped that, during the coming year, a considerable number would be added to the various classes, and they had no doubt that the best exertion of Mr. Nursey and Mr. Wood would be employed to give efficiency to the new arrangement.

Mr. Cairns, M.P. delivered the annual address, in course of which, and while meeting objections to the cultivation of art in our manufactures, he made some remarks on the history of paperhanging which we may briefly quote:—"The objector will say, 'Look at the French papers which ornament our rooms, and you will constantly find on them the best designs, and that ought to show that the French people have some peculiar style which we cannot arrive at.' Now, I say, take this very case of French paperhanging. The fact is, that fifty years ago the whole of the paperhanging trade was in the hands of English manufacturers. What happened then? The English manufacturers, satisfied with the practical monopoly of the trade, and free from all competition, turned their attention rather to the production of a paper remarkable for its cheapness and the improvement of the mere material, than to the improvement of the patterns on the paper; and they continued to reproduce the old patterns; or if they brought out new ones, such

as were not composed with any attention to the rules of taste or art. Whilst this was going on in England, there commenced in France that artistic education of the population to which I have referred, and one of the first subjects of its operation was paperhanging. The artisans, therefore, who were instructed in the Government schools found it very easy to produce patterns infinitely superior to anything in England. Consequently, they got a-head of the English manufacturers, and that superiority they obtained partly by their having the first start in the matter, and partly by the supineness of the English manufacturers, and they have maintained it to the present day; so that it is quite true that we get the best papers from France, but it is also true that this is owing to the circumstance that the English manufacturers did not choose to do that justice to their product which a little care and pains would have afforded. But we have a proof that the art has not left the country, and that if the artists are properly trained we can yet resuscitate the trade. That proof is this: Mr. Owen Jones educated a band of men in elementary instruction in drawing, and within eighteen months he produced papers, manufactured in England, and with patterns designed there, which, in the opinion of every one in England and on the Continent who has seen them and is competent to judge, are superior to anything that has been brought out in France. This was because the attention of these men was brought to bear on the subject, and because they were placed under the instructions of one who was competent to guide them."

PROCEEDINGS UNDER METROPOLITAN BUILDINGS ACT.

SEWELL (Appellant) *v.* BADGER (District Surveyor, Respondent).

THIS case was heard at the Sessions-house, Maidstone, on the 4th of April, before the Earl of Romney and a bench of magistrates.

Mr. Clarkson, in opening the case for appellant, stated that a conviction had been made by Mr. Secker, the magistrate at Greenwich, against Messrs. Sewell, builders at Sydenham, at the instance of Mr. Badger, on the ground that due facilities had not been afforded him, as district-surveyor, in inspecting a building at Longton-grove, Sydenham, erected, at first, as an insulated building, but which was afterwards converted into two dwellings, by bricking up certain openings, originally left in the main division wall (which was built of the requisite thickness for a party-wall), and surveyed throughout by Mr. Badger from the commencement to its completion. The builder had given his first notice to the district-surveyor for an insulated building; and a second notice when he proposed to alter it into two. The district-surveyor, however, considered that Messrs. Sewell were endeavouring to defraud him of the fees to which he was entitled under the Act, and made application to the magistrate for the purpose of taking proceedings by way of penalties; but the magistrate refused to entertain it. Mr. Badger then went before the official referees, under the 14th section, when Mr. Clarkson attended for Messrs. Sewell; and the referees, after due deliberation, awarded that "there was no evidence of any act done by Messrs. Sewell contrary to the statute;" and ordered Mr. Badger to pay the costs of the award, as also the costs of Messrs. Sewell. The award was taken up by the builders, who applied to the district-surveyor for their expenses, which he refused to pay. A notice was then served by him on Messrs. Sewell of his intention to make a survey of the party-wall, and for that purpose required them to open the foundations,—to cut into the chimney-breasts and lay open the flues,—to take up the floors and portions of the several ceilings in order to exhibit the trimmers and timbers of partitions, together with various other cuttings and maimings, which were considered by the builders as amounting to a partial destruction of the building. On the non-performance of these requirements, the district surveyor took out a summons, and Messrs. Sewell being unable to attend before the magistrate, the present conviction was obtained. Mr. Clarkson then stated that it was against this conviction Messrs. Sewell were advised to appeal, and intimated to the Court that his learned friend (Mr. Horn) held a retainer on the part of the respondent, though he was not instructed to support the conviction; and as this would have the effect of putting the appellants, whom he represented, to the enormous expense of coming down there (twelve witnesses being in attendance), gross injustice might be done, if the appeal was well founded, by no party appearing to support the conviction.

The Magistrates, after a short conference, announced through the noble chairman, that they had come to the determination to quash the conviction.

Mr. Clarkson then addressed the bench to be allowed to prove his notice of appeal, and the recognizances that had been entered into, and urged that he was entitled to ask for the costs.

Mr. Horn, on behalf of the respondent, interposed by stating that Mr. Badger had been subpœnaed to attend the Assizes at Kingston, and that, as he had only that moment received instructions to defend his client, he intreated the Court to reconsider its decision, or to allow the case to stand over to the summer sessions.

The Bench again conferred, when the Chairman stated that, as the conviction had been quashed, Mr. Horn could only be heard as to the application for costs.

Much warm discussion took place between the counsel on both sides, when Mr. Horn, on behalf of the respondent, stated that he was not prepared to go on with the case, and he would rather pay the costs of the day, and let the matter drop altogether.

The Chairman announced the conviction to be quashed, and the costs to be paid by Mr. Badger.

The case excited great interest, and will be a costly one.

A "SUBLIME STORE" AT PHILADELPHIA.

AN American "Subscriber from the beginning," with the signature C. L. writes us from Philadelphia, drawing our attention to what he calls "one of our sublime stores that we build," and which the local *Ledger* calls "a business palace." The store is five stories high, with a front of Quincey granite on Market-street, and pressed brick, with heavy granite dressing, on Commerce-street. It is between 27 and 28 feet broad, and 205½ feet long. To the first and second stories are added a wing 28 by 31 feet, on the west side. The main entrance is through a vestibule, 8 by 12 feet, adorned with tesselated marble. This leads to the first floor, which is finished in the most elaborate and splendid manner. The shelving is decorated with ornamental pilasters, having carved caps and a rich entablature. A handsomely-carved cornice, tipped with gold, extends around the entire room, with enriched brackets and dentils, in keeping with the frescoed (?) walls and ceiling, and the elegant bronzed chandeliers, of new and beautiful pattern, producing an attractive and gorgeous effect. The stairs in the wing or tower are elliptical in their design, and extend from the passage in the sub-cellar to the roof, seven stories, or nearly 80 feet high. They have massive carved oak rails, capped with black walnut and ash. The second story is finished in a style very similar to the first, with a counting-room, splendidly furnished, and a room in the rear, cut off by a glass partition, for a sample-room. This is to be fitted up in the same gorgeous manner with other parts of the store, and is to be covered with a fine Brussels carpet. The walls and ceiling are also frescoed, and much care has been taken to arrange the colours so as to throw the proper shades on the various kinds of goods. Adjoining this is the hatchway and hoisting-machine, extending from the first to the fifth floors, which is an entire new arrangement. The third floor has a bath-room, with hot and cold water, &c. The two upper stories are the same as those below, except that the walls are plain. This store has been built with the very best materials, and the workmanship is acknowledged to be of the very finest character. There are upwards of 150,000 feet of joists, each four by 15 inches. The quantity of lumber used is upwards of 252,000 feet, with nearly 40,500 feet of shelving. Communication can be had by trumpets and bells with every floor. The whole establishment is brilliantly illuminated. The chandeliers are bronze, relieved with gold, and "quite pretty." The architect is Mr. J. C. Hoxie; builder and superintendent, Mr. Charles A. Rubicam; the painter, John Gibson; the maker of the counting-room, desks, and furniture, J. T. Hamitt; plumbers, Forsyth and Brother; excavator, William Wilt; stonemason, Michael Carman; bricklayer, David Thorne; plasterer, James Spencely; smith-workers, Stewart and O'Hare; tin-workers, Ford and Melloy. The granite front, which both for design and execution excels any similar structure in the city, was put up by S. K. Hoxie. Our correspondent only wishes they had some of our "English critics to tell them which is Gothic and which is Grecian" in some of these "splendid architectural piles."

Notices of Books.

An Account of the Progress of the Expedition to Central Africa, performed, by order of her Majesty's Foreign-office, under Messrs. Richardson, Barth, Overweg, and Vogel, in 1850-53. By AUGUSTUS PETERMANN, F.R.G.S. London. 1854.

A VIRULENT attack was made on the progress of this expedition in the *Nautical Standard* of January last, merely, as it would appear, on the narrow-minded ground that its survivors are both Germans, though acting under the British Government. It is even believed that an official connected with the Geographical Society, had something to do with it, and at all events, while in the "authorized report" of a meeting of the Society, a paper actually giving an account of the progress of the expedition was suppressed; an attack, in form of a speech also given, had been very prominently published, in juxtaposition to this "authorised report" of the proceedings. This is an instance of the danger of allowing secretaries too much license in dealing with reports and papers. In this instance, Mr. Petermann deals very summarily with the attack upon his countrymen, first knocking their assailants down with his great folio, published "by authority of her Majesty's Foreign-office," and then cutting them up into small pieces, in a "Letter" of his own, addressed to the President and Council of the Society.

VARIORUM.

THE Kilkenny Archæological Society's Transactions for the year 1852, forming Vol. II. Part I. of the doings of this active and prominent Association, are now on our table, and, as already intimated, by new arrangements the proceedings of the present year are to be facilitated and issued as speedily as possible in portions after the papers have been read. The present volume is fully illustrated, and contains a large mass of archæological, architectural, and antiquarian lore.——A reissue of Mr. Knight's very popular "Land we live in," in threepenny monthly or weekly parts, by Messrs. Orr, of Paternoster-row, will gratify a class heretofore shut out from its pleasant pages. It appears just as it did before, in good bold type, on large octavo, with illustrations.——Orr's "Circle of the Sciences" is thriving. The last number contains the commencement of a treatise on the mathematical sciences, by Professor Young; and the previous number, a continuation of Professor Owen's Treatise on the "Forms and Structures of the Teeth."——The "Home Companion" (the same publisher) has taken a fresh and more convenient shape, and maintains its character as an interesting publication.

Miscellanea.

LAMBETH: A NEW MOVE IN TRADE.—On Saturday last was launched from the dock, Nine-elms, a fine merchant ship of 500 tons, the first and largest vessel of her class that has been built in this part of the Thames. Her bottom is fashioned like the large coal barges, with ships' upper works, and with a spacious flush deck, and *will draw only* 10 *feet of water*, giving ample room for stowing timber, tallow, hides, &c.; being intended for the East country trade. Steam-power can also be applied, if required. She went off in capital style, and was named by the owner's daughter, Louisa Shelbourne, after whom she is called. She is sheathed with Belgian zinc, fastened with zinc nails. This metal is now 75 per cent. higher than it was at the Great Exhibition. Copper is much stronger, and could have been used with better effect, 12 oz. per foot lighter than this vessel is sheathed with: less labour would be also required, and for *hard work, surely the very best material should always be chosen*. And if strips of zinc, 8 inches by 2 inches, were screwed on each course of copper, the galvanic influence would prevent oxidation of the copper, and keep the barnacles from fastening on the metal. I can testify to a case where, after twenty months, a vessel returned from her voyage with the copper as clean as a mahogany table.—B.

BUILDINGS IN BRIGHTON.—I can bear testimony to the scamping manner buildings are erected by men who dub themselves builders, engaged on houses of magnitude near to me. I view with regret the very dangerous mode of forming boarded trimmers instead of brick, and using as a substitute for stone, Baylis or cement hearths, in many cases, I see, not an inch thick. Heat causes the boards to contract and crack the cement. An old-established builder related a case that came under his especial notice, in Lansdown-place, not long since: the boards ignited from this cause. In the house I am now staying in, though recently erected, the joiner's work is the climax of scamping; doors shrinking at every joint, stairs cracking as you ascend or descend, partitions shrunk for want of proper trussing, window-frames loose and separated from the brickwork. What can be expected when most of the works are prepared, in the buildings during their progress, of unseasoned materials. There are several very respectable old-established builders here who perform works in the best manner, as many London architects can testify.—PRO BONO PUBLICO.

DRY BASEMENTS.—I beg to add a little of my practical experience of how to prevent a house being damp, *especially* at the basement. I reside in a house I built in the wet winter of 1852-53, and occupied in April without harm. The basement floor is 2 feet 6 inches in the ground, which lies up close to the wall all round, yet the walls below are as dry as above ground. At the floor line is laid a thickness of cement on the brickwork, and it is then cemented up above ground, and the floors are all of cement, so that it is watertight: the inside walls are also cemented ground high. The front and ends of the house are cemented all over, stone-like, and keep dry, while the back is not, and in wet weather is damp, being in an exposed situation. But the use of the cement requires great care; in fact, the ordinary manner of doing it makes its failure a daily occurrence, while works of thirty or forty years' standing can be pointed to as perfect by—J. P.

THE SEWERS COMMISSION.—We have reason to believe that the cause of Lord Palmerston not having as yet appointed a new commission is, that he is waiting for the report of the City of London Corporation Commission, in order to see what the views of the commission are with reference to there being but one executive as regards sewers for the whole metropolis. This report will be presented immediately after the Easter recess, and we anticipate that a bill will shortly afterwards be introduced to place the management of the sewers and other matters upon a permanent footing. This measure ought unquestionably to become law before the prorogation of Parliament. To introduce, as was the case last year, merely a continuation bill, would be pregnant with great evil. Weeks and months would pass by, and when Parliament met again the metropolis would be in the same unsatisfactory condition as at present. Six precious years have elapsed since the first commission was established. Hundreds of thousands of pounds have been expended, and yet what is there to show for it? The same districts remain undrained, the Thames is still the huge common sewer, and but few of the cesspools have been abolished. The vast sewers, so bitterly complained of as being nothing better than extended cesspools, pregnant with disease and death, are still sending forth their poisonous emanations. The few extensive works, such as the Victoria Sewer, which, instead of costing only 13,000*l.* has already had expended on it 40,000*l.* and is yet incomplete, have proved failures.—*The Observer.*

BUILDING SOCIETIES. — It would be of great advantage, if such societies could act unitedly in anything affecting their interests. Take, for instance, the subject of fire insurance duty, which operates as a serious tax on industrial savings, and which I have no doubt, if taken up vigorously by the societies in a united manner, might receive more consideration than if taken up by insurance offices. If any of your correspondents could give me an estimate of the probable number of societies and members, the amount of capital supposed to be raised annually, and would make any suggestions for an organization of the kind, I think that I could facilitate the object very materially in Manchester and the surrounding district.—J. W. *** There is a Building Society's Almanac, which contains a list of such associations.

WORKMEN AND WAGES.—The excavators employed in enlarging the Sunderland Dock lately struck for a rise of 6d. a day, and the abolition of "tommy shops." The dock directors, at their meeting, were surprised to hear of truck, and intimated to the contractors that they would prosecute any who continued the practice. The shops are given up, and the 6d. conceded.——The *Gateshead Observer* mentions a frightful case of rejoicing. The foreman of some extensive works died; and as soon as it was known, the men and boys employed formed a procession, marched to the dead man's house, and gave three cheers. The cause of all this was that the deceased had originated a "tommy-shop" and dram store within the works.——Five brickmakers at Oldham, apprehended under warrants for conspiracy, have been required to enter into sureties to answer any indictment that may be preferred against them at the next assizes.——The house-carpenters of New York have struck for an advance of 1s. a day, making their wages 18s. a day.

ARCHITECT TO THE COMMITTEE OF COUNCIL ON EDUCATION.—The Lord President has selected Mr. Rhode Hawkins for appointment to the office of advising architect to the Committee of Council on Education, in the room of Mr. Westmacott, who has retired.

FLEAS.—PROH PUDOR!—Having taken a small house just fresh from the builder's hand, I am much annoyed to find the upper floor completely swarming with *fleas*, all seemingly lodged between the floor boarding and the ceiling underneath. Can any of your correspondents advise me how to eject this army of invaders, the rooms at present being quite uninhabitable?—A VICTIM.

A NEW MECHANICAL POWER: THE ACCUMULATOR.—Mr. R. E. Hodges, late British Vice-consul at Jacmel, while in Hayti or St. Domingo, happened to see an old African in the forest, all alone, with nothing brought with him but a hatchet, a long knife, and a saw. He cut down mahogany-trees with his hatchet, and after lifting them (probably a ton weight each) from the ground to a considerable height, and placing them upon cross-trees, so fixed as to form a convenient frame, there he cut them into rough planks with his saw. Now, the lifting of a log of a ton weight by one man under such circumstances was something extraordinary. Yet it was very simply done, though, perhaps, a little tedious. With his knife he cut numerous creepers, to serve him for ropes. He laid branches on an incline to the top of his frame, and tying the creepers one by one to the elastic branches of the standing forest-trees beyond and above the incline, but in the same direction, on the one hand, and round the log in various parts on the other, drawing each elastic branch by turns to its fullest bent as he tied the creepers, he thus obtained a resilient force in the branches to help him, so that with ease, by means of his hands, he could manage to lift the log by degrees along the incline to the top of the frame. In India-rubber Mr. Hodges has found an application of a similar force to that of the elastic branches of the trees, and by various ingenious devices he has managed to put this elastic force to use as cords, by means of which manual labour may be greatly assisted. Thus, for instance,—"In erecting and fitting machinery, or in bedding masonry, an "accumulator" of convenient power may be attached to the hook of the usual lifting-chain, and again made fast to the body to be so fitted or bedded; and supposing this body to be a stone of a ton weight, the mason and his assistant could depress it at will by the mere weight of their bodies, and effect quickly a perfect bedding." This new power has, it is evident, one peculiarity differing from other mechanical appliances for moving bodies: this is, that the power may be accumulated at any convenient time (even by a single man), and made to act suddenly when required—as for lifting heavy articles out of ships' boats. This, indeed, is the principle of Mr. Hodges' patent projectors for throwing harpoons, &c. For his various inventions on this principle the patentee had honourable mention made of him at the Great Exhibition of 1851.

CANOSA, as is well known, is one of the most celebrated ancient Greek cities in Puglia, and is the only one in the whole kingdom which offers the wonderful contrast of a Greek Pompeii to our Roman Pompeii. It is situated on a rising ground, in the centre of a plain which is surrounded by a semicircle of low hills. Between these and the modern city the plain encloses for many miles of circumference the old Necropolis, or city of the dead. At every step, on digging three or four feet underground, we meet with an old path, which conducts by a descent to a tomb composed of one or more chambers, and which is surrounded on the outside by other funeral apartments. Their "facciate" are decorated with columns and frontispieces, and are painted with lively colours; their gates are so well closed by vertical pieces of tufa, that the soil has not been able to penetrate them. We enter, therefore, these habitations of the dead as we walk into the houses of the living. The light of the sun shines in upon them as it did twenty centuries since,—and in the very middle of the first chamber reveals one or more skeletons fully clothed, with their arms or precious ornaments. Around them stand painted vases, furniture of every form, utensils of various kinds, and metals, precisely in the spots where their relatives or dearest friends had placed them. The walls are adorned with elegant pictures, with friezes bearing the figures of warriors who combat, and with decorations of an original style hitherto unknown.—*Athenæum.*

RUSSIA AND AFRICA, AND ARTIFICIAL LIGHT.—Curious juxtaposition, yet closely connected. How so? Simply this—Russia has supplied us with tallow, Africa with palm-oil. But what of that? War with one reduces the traffic of slaves in the other. Reduce our supply of tallow, we extend the demand for palm-oil—"a good in everything." African kings find it more profitable to keep their people than to transport them—*ergo*, war with Russia will decrease the slave-trade.—W. F. B.

DWELLINGS FOR THE WORKING CLASSES.—Having read your criticism, which appeared a few weeks ago, on a monument about to be erected by or under the sanction of a large firm in the midland counties to the memory of a late partner, I beg to suggest a better scheme for their consideration, viz. the erection of some cottages of a superior class for their workmen instead of the *worse* than pigstyes that I saw when in that part of the country last summer. This would be a worthy testimonial to the departed and a great benefit to the living.

A TRAVELLER.

ARCHITECTURAL SOCIETY OF NORTHAMPTON.—At a committee meeting, held on April 3rd, a window of Powell's glass was exhibited by the manufacturers, as containing specimens of the new glass made by them. The amount of the glass used was, however, too limited to give any idea of its effective qualities. A memorial window, to the memory of the late Hon. R. Watson, that has just been placed in the chancel of Rockingham Church, after the designs of Mr. G. Hedgeland, and executed by Mr. Ward, is composed of this new glass. The style of composition and drawing in this window is thought by some too modern, and not the best suited to painted glass. The spring meeting was fixed for Leicester, in conjunction with the Lincoln and other societies, on the 17th and 18th of May. A communication from the Dean of Peterborough acknowledged the receipt of the vote of thanks of the society on the opening of the cathedral to the public, and it was stated that already had Norwich followed the example of Peterborough, and that other cathedrals were meditating the same course. No answer had yet been returned from the committee of the Agricultural Society, relative to co-operation with the Architectural Society for the production of better designs for labourers' cottages.

THE IRON TRADE.—The final result of the quarterly meetings is, that prices shall remain unaltered. The trade is still in an active state, with a good supply of orders, not only for home consumption, but for America, and for the north of Europe itself. The only complaint is, the scarcity and high price of raw materials. Instead of raising prices, however, in consequence, there seems to be a prudent resolution to turn attention to means of reducing the cost of raw materials. Coal is getting more abundant, and there is talk of the erection of an immense steam-engine to withdraw the water from large tracts of valuable coal land in Staffordshire, now inundated, and whereby 5,000 additional colliers might be employed. The iron stone of Northamptonshire is forcing itself into notice.

ENCLOSURE AT CHOBHAM COMMON.—There seems to be a risk of one of the finest portions of this common being appropriated and enclosed for behoof of Sir Denis le Marchant, the chief clerk of the House of Commons, and under certain clauses smuggled through Parliament, it is alleged, to that special end. The portion of common of which it is proposed to deprive the public comprises about 35 acres, beautifully timbered with upwards of 300 ancient trees, many of them 12 feet in circumference. It adjoins other properties, held by the families of the present proprietors for centuries, quite as much as that of Sir Denis le Marchant, purchased by him only a few years since. One of the former, Mr. Richard Gude, jun. has petitioned the Crown against such an enclosure.

THE BARON DE BODE'S BOTTLED-AIR-POWER.—The Piedmontese Government, according to a Paris paper, has just granted a sum of 80,000f. to MM. Sommeillier, Grattoni, and Grandis, for an experiment on the application of compressed air to locomotion, which will probably be used in the ascent of Mont Cenis and the Col de Tende.

WELLINGTON STATUES.—At a recent meeting of the Norwich Wellington Statue Committee, it was agreed to appoint a deputation to approve the statue, previous to its being cast; and Mr. Adam's studio has been visited for that purpose. The report is said by the *Norfolk Chronicle* to be in all respects satisfactory. One of the deputation (Mr. Peto) says, "I do not know when I have been so entirely satisfied with the execution of a work of art."——The Falkirk committee have very nearly concluded arrangements for the erection of their statue, which, according to the local *Herald*, will probably grace the Cross of this ancient burgh ere the approaching summer has far advanced. The work of building the pedestal and placing the statue, has been entrusted to a townsman, Mr. James Gowans, of Edinburgh, builder, who erected the Edinburgh statue in front of the Register Office. The execution of the pedestal, which is exceedingly simple, including the carriage of the figure and the complete fitting up, will cost 42*l.* The statue itself will cost 70*l.* so that the two chief items of expenditure amount to 112*l.* The subscriptions already amount to 132*l.*

TO CORRESPONDENTS.

"Mr. P." (thanks), "W. P." "C. H." "E. G. B." "J. W. P." "Subscriber," "E. H." Whitehall (obtain a personal introduction to the secretary of one of the lines). "Constant Reader" (write to the district-surveyor), "P. Q. of Wygorn" (a general reply might mislead. Take proper advice), "T. B. D." (process is patented, but we are not aware if it is being practised), "D. W. R." "W. J." "Cosmorama," "J. H. jun." "W. S." "S. B." "T. A. Y." "W. and A." "R. L." (we will receive any specific charge our correspondent may desire to make in his own name), "W. P." "C. M." "W. W."

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